PART 3.

THE

ARTIST'S REPOSITORY;

OR,

Encyclopedia of the Fine Arts:

EXHIBITING THE PRINCIPLES,

AND

EXPLAINING THE PRACTICE,

IN ALL THEIR VARIOUS BRANCHES.

A Work calculated to instruct the Student, and to gratify the Professor. It contains the Principles of delineating the Human Figure, &c.; the Methods of preparing and using all Kinds of Colours: Instructions for Painting: Engraving, &c.: Essays on Sculpture, Perspective, Architecture, and Landscape:—with a variety of Information connected with the Arts, their Principles and Practice, in their various Manners and Branches; including upwards of

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THE intent of the ARTIST'S REPOSITORY, OR ENCYCLOPEDIA OF THE FINE ARTS, is to cultivate as much as possible, our national taste for the Arts; it is therefore calculated for two purposes, one to initiate and instruct young persons of both sexes whose genius prompts them to these studies; the other to gratify the taste of the Professor, whose judgment is mature. To accomplish this design, it commences with the Principles of Art, and proceeds regularly until it comprehends a Complete System of Picturesque Knowledge.

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Dot the clear and bright parts, with carmine and a little vermilion, using a very little ochre, to lose, or blend, them, in the shadowy parts, and make the tints die away insensibly into one another; taking care as you dot, to round the parts, by giving your strokes the different turns of the flesh.

The whites of the eyes are shaded with blue; the corners next the nose with vermilion and carmine; the sight of the eye (or the iris) with indigo and white, adding bistre if it be brown; or black if it be grey; the pupil with pure lamp-black. Shade the sight with indigo, bistre, or black, according to its color; the marking of the eye-lids shadow with carmine and bistre, which must be softened with the other tints; this done, give the little touch of light that falls on the chrystal with pure white. This gives a brilliancy, and life, to the eye.

The lips are dead-colored with red lead, or vermilion, and shaded with carmine, or lake. The markings, or dark touches, with bistre and carmine.

The hands are colored as the face, observing that the joints, and ends, of the fingers, are a little redder than the rest. The markings, as directed for the eyes, lips, &c.

Hair is dead-colored with bistre, ochre, and white, or black, according to its different colors; and finished with pure bistre, mixed with ochre or black; the lights with ochre. The roots of the hair next the face must be softened into the blue tints; and great care must be taken to paint the hair light and soft, and to avoid a hard, wiry, manner. The eye-brows are done as the hair.

Colors composed for Draperies, Lace, &c.

For BLUE DRAPERY.—Prussian blue, or ultramarine and white, shaded with indigo.—Verditer, shaded with indigo.

RED DRAPERY.—Red lead, or vermilion, shaded with carmine, or lake.—CARMINE DRAPERY. Form the shades with vermilion, and finish with carmine, the dark touches with bistre.-

PURPLE DRAPERY.—Lake, blue and white, finished with lake and indigo. Varied—by adding more blue, or more lake.

YELLOW DRAPERY.—Yellow ochre, Dutch pink, gamboge, or Naples yellow, shaded with terra di Sienna, and bistre.

GREEN DRAPERY.—Prussian blue, or verditer, and Dutch pink, shaded with sap green. Remember, different greens are mixed by using more, or less, of blue, or of yellow.

BLACK DRAPERY.—Lamp-black and white, shaded with pure lamp-black. To give the lustre of velvets, &c. use indigo in the dark shades.

WHITE WOOLLEN DRAPERY.—White, and a little ochre, or gamboge, to give it a yellowish tint; shade with bistre.

Draperies should be done with broad strokes of the pencil, as the back-grounds. Several other kinds of draperies may be painted, according to what is desired, always taking care to preserve harmony in the coloring.

LACE.—Dead color with blue, black, and white, nish with pure white: when it lies transparent over draperies, or carnations, finish the under parts first,

then

then paint your lace over them with pure white, and shade with the first color.

Gold lace.—Dead color with ochre; and finish with Dutch pink and red lead.

Silver lace.—Blue, black, and white, finished with pure white.

Pearls.—White and a little blue for the dead-color, shade with light blue; the speck of light in the middle with pure white, and a little yellow transparent tint on the shadow side, to round them,

Diamonds.—Lamp-black, the lights touched with pure white. All other jewels are painted in the same manner, only changing the dead-color.

It is a frequent over-sight in artists to think when they have completed the head of a portrait, which being drawn from nature, possesses in consequence a considerable degree of truth and force, that the picture is finished, and their work is done; whereas much of the grace of the picture, and very much of the general effect of it, depends on the addition of accessaries, which are to complete it; these, if well disposed, and apply suited to the main subject, not only embellish that subject, but confirm and invigorate its effects, by imparting a splendor and brilliancy throughout the whole:—whereas if unsuitable and unfit, they enfeeble what has been already well done, and spoil that which in itself had spirit:—In short, for these also consult Nature.

OF CRAYON DRAWINGS.

The following article will furnish much information in the manner of using crayons, which may with propriety be adopted in drawings, intended afterwards to be finished with chalks ; to that article, therefore, we refer, as illustrating the present.

The procedure, in this instance, is, by preparing the masses of light and shade with crayons, either lightly touched with the finger, or more accurately defined with a stump, according to the size of the subject. The drawing being thus inserted in proper colors, the chalks (chiefly red and black) are very neatly stippled into every speck, or interstice, agreeably to the color of the part, *i. e.* using *red* chalk, where the flesh inclines to *red*, and *black* chalk in the shadows, or, in the parts inclining to *blue*, &c.

In working some subjects, it is a good way to scrape a little powder off each crayon that may be requisite, and to lay the several little heaps of color in order on white paper ; then (the outlines being previously drawn) with small rolls of paper carefully made, rub in the colors ; and finish with chalks.

Stumps made of kid-leather (gloves, if not soiled in that part, serve very well) rolled up tightly, will answer the purpose yet better. Some use stubbed camel's-hair pencils.

Several crayons made of earths, when thoroughly dried, then gradually warmed, or rather heated, and dipped into linseed oil, till saturated, may be sharpened to a very fine point; and the lines drawn by them, will not be injured without violence. Perhaps, by judicious experiments, a complete set might be composed.

OF

OF CRAYONS.

The perfection of crayons consists much in their being kindly tempered; for it is impossible to execute a brilliant picture with them if they are not; on which account great care should be used in forming them, to prevent their being hard. We have already forbid white lead in their composition, because it will certainly turn black; which white chalk, tobacco-pipe clay, or whiting, well washed, will not do.

Whether a painter works with oil colors, water colors, or crayons, the grand object of his pursuit is still the same—a just imitation of nature: But each species has its peculiar rules, and methods. Painting with crayons requires, in many respects, a treatment different from painting in oil; because colors used dry are generally warmer than when wet with oil.

The proper paper for crayons is a strong paper, either brown, or blue; the thicker the better, if not too coarse and knotty. The knots should be levelled with a pen-knife, or by hard rubbing; then paste the paper very smooth on a linen cloth, previously strained; but, some artists reckon it most eligible to delay pasting the paper till the subject is dead-colored. The method of doing this, is by laying the paper thus dead-colored, on its face, on a smooth table, and pasting the back of the paper; the frame, with the strained cloth, must then be laid on the pasted side of the paper, after which turn the painted side uppermost, and lay a piece of clean

paper on it to prevent injury: this done, it may be stroked gently with the hand, by which means the air between the cloth and the paper will be forced out.

Sitting, with a box of crayons in the lap, is the most convenient posture to paint in.

The box made use of, when the student paints, should be about a foot square, having nine partitions in it. In the upper corner, on the left hand, (supposing the box in the lap) place the black and grey crayons, those being the most seldom used; in the second partition, the blues; in the third, the greens and browns; in the first partition on the left hand of the second row, the carmines, lakes, vermilions, and all deep reds: the yellows and orange in the middle; and the pearl tints next; as these last are of a very delicate nature, they must be kept very clean, that the gradations of color may be easily distinguished: In the lowest row, let the first partition contain a piece of fine linen rag to wipe the crayons with while they are using; the second, all the pure lake, and vermilion tints; and the other partition may contain those tints, which, from their complex nature, cannot be classed with any of the former.

That part of the picture which is immediately painting, should be rather below the face of the painter, for, if it be placed too high, his arm will be fatigued. The windows of the painting-room should be darkened, at least to the height of six feet from the ground (as before directed for miniature) and the subject to be painted should be situated in such a manner, that the light may fall with every advantage.

PROGRESS OF A PORTRAIT.

The features of the face being correctly drawn with chalks, take a crayon of pure carmine, and carefully draw the nostril, and edge of the nose next the shadow, then, with the faintest carmine tint, broadly lay in the highest light upon the nose, and the forehead. Proceed, gradually, with a second tint, and the succeeding, to the shadows, which must be covered brilliant, enriched with lake, carmine, and deep green. This method will, at first, offensively strike the eye, from its crude appearance, but will be a good foundation to produce a pleasing effect, in finishing; colors being much more easily sullied, when too bright, than raised to brilliancy. The pearly tints of fine complexions must be imitated with blue verditer and white; but if the parts of a face where those tints appear, are in shadow, crayons composed of black and white must be substituted.

Though all the face should be laid in as brilliant as possible, yet each part should be kept in its proper relation of tone, and of color, to the others.

Touch in the eyes with a crayon inclined to the carmine tint, brilliant, not loaded with color, but lightly: incline the light of the eye very much to a blue cast, cautiously avoiding a staring white; preserving a broad shadow occasioned by the eye-lash. Avoid a heavy tint in the eye-brows; treat them like a broad, glowing, shadow, on which afterwards the hairs of the brow are to be painted; by which method the former tints will shew through, and produce a pleasing effect.

Begin

Begin the lips with carmine and lake; the strong vermilion tints should be inserted afterwards. Mark the corner of the mouth with carmine, brown ochre, and greens, intermixed. If the hair is dark, preserve much of lake, and deep carmine, therein; this may be easily overpowered by the warmer hair tints, which will produce a rich effect when finished.

Having dead-colored the head, sweeten the whole together, by rubbing it over with the finger passed very lightly, beginning at the strongest light on the forehead, uniting it with the next tint, and, so on till the whole is sweetened together, often wiping the finger, to prevent sullying the colors. Be cautious not to smoothen, or sweeten, a picture, too often, because it will produce rather the appearance of a drawing, than of a painting. To avoid this, replenish the picture with crayon wherever, and as often, as necessary.

When the head is somewhat advanced, let the back-ground be laid in; which must be treated in a different manner, covering it as thin as possible. Near the face, the paper should be almost free from color, for this will do the head great service by its thinness. In the back-ground, no crayon that has whiting in its composition should be used, but chiefly such as are least adulterated. The ground being thin next the hair, will give an opportunity of painting the edges of the hair in a light manner, when finishing.

The face, hair, and back-ground being covered, carefully view the whole at some distance; remarking what

what parts are too light, and what too dark; being particularly attentive to white, or chalky, appearances, which must be subdued with lake and carmine.

The next step is to complete the back-ground and the hair; because the dust, in painting these, will fall on the face, and would much injure it if that was completed first. From thence proceed to the forehead, finishing downward till the whole picture is completed.

In painting the forehead the last time, begin with the faintest vermilion tint, in the same place where the faint carmine was first laid, keeping it broad. In the next shade work in some light blue tints, intermixing with them somewhat deeper vermilion tints, melting them into one another. Some light yellows may also be used, but sparingly; toward the roots of the hair, strong verditer tints, intermixed with greens, will be of use. Pearly tints, composed of verditer and white, are to be preserved beneath the eyes, under the nose, and on the temples; beneath the lips, tints of this kind are proper, mixing them with the light greens and vermilion.

In finishing the cheeks, let lake clear them from any dust contracted from the other crayons; then, with the lake intermix bright vermilion; and, last of all, (if the subject should require it), a few touches of orange-colored crayon, but with extreme caution; after this, sweeten that part with the finger as little as possible, for fear of producing a heavy effect.—The beauty of a crayon picture consists, in one color shewing itself through, or rather between another; this being the only method of imitating beautiful complexions to advantage.

The eye is the most difficult feature to execute in crayons, as every part must be expressed with the utmost nicety, to appear finished; at the same time that a painter must preserve its breadth, while particularising the parts. To accomplish this, it is a good general rule to use the crayon in sweetening, as much, and the finger as little, as possible. When a point to touch a small part with, is wanted, break off a little of a crayon against the box, which will produce a corner. To dark eye-lashes, use some of the carmine and brown ochre, and the crayon of carmine and black; and with these touch the iris of the eye (if brown, or hazel). Red tints of vermilion, carmine, and lake, will execute the corners of the eye properly; but if the eye-lids are too red, they will have a disagreeable appearance. The pupil of the eye must be of lamp-black; between this and the lower part of the iris, the light will catch very strong, yet it must not be made sudden, but be gently diffused round the pupil till lost in shade. When the eye-balls are sufficiently prepared, the shining speck must be made with a pure white crayon, first broken to a point, and then laid on firm; but, if defective in neatness, it may be corrected with a pin, by taking off the redundant parts.

The difficulty, with respect to the nose, is to preserve the lines properly determined, at the same time so artfully blended into the cheek, as to express its projection, and yet no real line to be perceptible on close examination. In some circumstances it should be quite blended with the cheek, which appears behind it; and determined entirely with a slight touch

of

of red chalk. The shadow caused by the nose is, generally, the darkest in the face, partaking of no reflection from surrounding parts. Carmine and brown ochre, carmine and black, and such brilliant crayons will compose it best.

Having prepared the lips with strong lake and carmine, &c. with these colors, make them completely correct, and, when finishing, introduce vermilions, but with great caution, as they are extremely predominant.

In coloring the neck, preserve the stem of a pearly hue, and the light not so strong as on the chest. If any part of the breast appears, its transparency must be expressed by pearly tints; but the upper part of the chest should be colored with beautiful vermilions, delicately blended.

. . . . .

It is evident, that the foregoing principles are applicable only to the finest complexions; it would be absurd, to treat the portrait of a sea-officer with transparent blues, and pearly tints. A variation of colors, according to the subject, is indispensable; but such variety is not difficult to whoever reflects on what has been already hinted. Crayons usually appear to greatest advantage, in the tender blendings of their tints, in female countenances: the warmer and bolder colors succeed best in oil.

*** We have been particular in noticing the *places* of the colors, because the same rules apply in many other subjects, and are drawn from nature itself.

OF DRAPERY IN CRAYONS.

Dark blue, purple, black, pink, and all kind of red draperies, should be first tinged with carmine, which will render the colors more brilliant than any other method; over this, should be laid the middle tint, except the masses of dark shadow, which may be laid on deep.

With the light and dark tints, the smaller parts are to be made with freedom, executing, as much with the crayon, and as little with the finger as possible: in each fold touching the last stroke with the crayon, which stroke the finger must never touch. In reflexions, the simple touch of the crayon will be harsh, therefore, fingering will be necessary. With respect to reflexions, in general, they must always partake of the same color as the object reflecting; but in the case of single figures, of whatever color the drapery is, the reflexion on the face must partake thereof, otherwise the picture, like paintings on glass, will have but a gaudy effect.

Linen, lace, fur, &c. should be touched spiritedly with the crayon, fingering very little, except the latter; and the last touches, even of this, should be executed by the crayon, without sweetening with the finger.

The coat of crayons should be but thin on the shadows, but in the lights a body of color will contribute to force, and to durability.

OF PAINTING ON GLASS, OR BACK-PAINTING.

This manner of painting is executed with great facility: it gives all the softness that can be desired, and is easy to work; there are no outlines to draw, nor shadows to insert, but the colors are put on without the trouble of either.

The prints for this purpose are done in mezzotinto, but many of those well-finished, engraved in the manner of chalks, are very proper; for, their shadows being blended together, when rubbed on the glass, appear soft, and united, as drawings in Indian ink.

From such prints cut off their margin, then on a piece of fine crown-glass, very clean, the size of the print, and free from knots and scratches, lay some Venice turpentine on one side, quite thin and smooth, with a painter's brush. Lay the print flat in water; when thoroughly wetted (which requires four-and-twenty hours for some sorts of paper, but other sorts are ready in two hours), take it carefully out, and lay it between dry papers, that the superfluous water may be absorbed.

Next, lay the damp print flat on a table, with its face uppermost; then, holding the glass over it, without suffering the turpentine to touch it till it is exactly even with the print, gently press the glass down in several parts; and turning it, press the print with your fingers, drawing them from the centre to the edges, till every part is quite smooth, and free from blisters.

This

This done, wet the back of your print with a sponge, till the paper will come off with your fingers; then rub it gently, and the white paper will roll off, and leave behind it only the ink which formed the impression. When dry, with a camel's-hair pencil dipped in oil of turpentine, wet it all over, and it will be transparent, and fit for painting on.

A sheet of white paper placed behind, will contribute to its transparency, and assist in determining the coloring, &c.

Lay the lighter colors, first, on the light parts of your print, and the darker over the shadows; and, having once laid on the brighter colors, it is not material if the darker sorts are laid a little over them; for the first color will hide those laid on afterwards.

The glass, when painted, must stand three or four days to dry, and be carefully covered from dust.

The proper colors are those used in oil; for their management take the rules laid down in the following articles.

. . . . .

Some years ago, the ingenious Mr. VISPRE exhibited a number of paintings on glass, the subjects, Fruit, Flowers, &c. As in this kind of painting the lights must be first inserted, the pictures are apt to suffer by a coldness; which is evident in the performances of those who are not perfect in the principles of their art. This must be guarded against; and care must be taken to give spirit to the pencil; otherwise the smoothness of the glass will impart a tameness to the picture.

GENERAL ELEMENTS OF PAINTING IN OIL.

Notwithstanding the predilection of many persons for pictures in miniature, or in crayons, there are scarce any who are not sensible of the superiority of oil pictures: their more accurate coloring, and their greater force, as well as their services in subjects of considerable dimensions, render them principal objects of attention.

Of the CLOTHS necessary for this kind of painting, also of the pencils, tools, pallette, and pallette-knife, &c. see the respective articles in the Compendium of Colors.

To these utensils most painters add, what they term a mall-stick; which is a slender rod, or stick, at one end of which is tied a ball of soft rag, cotton, &c. to prevent bruising, or hurting the picture, against which it rests. This stick is held in the left hand; and its use is, to support the right hand while at work, keeping it steady, and firm: but many artists who possess command and freedom of hand, decline the mall-stick as a bad custom.

EASELS are of various forms, and contrivances, but generally composed of three uprights or legs, the longest behind. In the two which are in front are a number of holes, corresponding in height to their opposites in each leg, so that when a peg is placed in them, whatever is laid on these pegs, is kept even. It is usual to place a slight piece of board (termed a shelf) on these pegs to support small pictures.

The

The colors proper for painting in oil, ase usually kept in the color-shops in bladders, at certain prices; and this is the best method of purchasing small quantities of them, except ultramarine, carmine, and vermilion, perhaps also the lakes and Prussian blue, which should be bought in powder, as in that state they will be best preserved; the least touch of these will give the picture a cast: mix up no more of these colors than you want for present use, which must be with a drop, or two, of nut-oil on the pallette, with the pallette-knife.

To get the color out of the bladders, prick a hole in the side of each, and press it, till you have sufficient for present use; as what remains will dry and skin over, and so become useless.

A great variety of colors are used in oil; the following is a list of the principal:

1. Flake White.
2. Fine Nottingham Lead.
3. Naples Yellow.
4. Patent Yellow.
5. Yellow Lake.
6. Yellow Ochre.
7. Ditto Burnt.
8. Red Ochre.
9. Light Red.
10. Fine Red Lead.
11. Vermilion.
12. Indian, *or* Chinese Vermilion.
13. Pale, *or* Bright Vermilion.
14. Indian Red.

 15. Scarlet

15. Scarlet Lake.
16. Purple, *or* Deep Lake.
17. Carmine.
18. Brown Ochre.
19. Sienna Earth.
20. Ditto Burnt.
21. Antwerp Brown.
22. Brown Pink.
23. Umber.
24. Umber Burnt.
25. Ultramarine.
26. Prussian Blue.
27. Lamp Black.
28. Ivory Black.
29. Bone Black.
30. Blue Black.

1. Flake White, when pure, is the very best white; though it has not the body of Nottingham White Lead. This color should be ground with the finest poppy oil.

White is a very friendly working color, and comes forward with yellows and reds—but retires with blues and greens. It is the nature of whites to *sink* into whatever ground they are laid on; therefore they should be laid on white grounds to preserve their brilliancy: or, a considerable body of the color should be laid on to allow for sinking in.

2. Of Nottingham Lead there are two sorts; the best is little inferior in whiteness to the best flake white; it will stand well.

3. Naples Yellow will not bear iron to touch it, without altering its tint. It should be a clean tender color.

4. Patent Yellow, a new invented color, very bright and durable—dries very well.

5. Yellow Lake should be used sparingly; time will deprive it of its beauty, unless it be well secured by varnish—it is a bad drier.

6. Yellow Ochre. The best stone ochre is very difficult to procure genuine; but the want of it may be supplied by Sienna earth and Nottingham white; which will produce pretty much the same tint, or rather brighter, with this advantage, that it is deeper in its tone, with less of the lead in it: the great body of the lead supporting the Sienna earth, which alone is semi-transparent.

8. Red Ochre is a valuable color, when prime and genuine, for though cheap, it is often to be had only of an inferior quality. The best is that which is very hard and stony, difficult to grind, more difficult to procure in perfection; this, with a little deep lake, is not inferior to the best Indian red, in many effects that may be produced by it. It is a friendly mixing color, of great use—should be ground with nut oil, though linseed oil is commonly used for it.

9. Light Red is fine light ochre burnt: this mixes very agreeably with white, and produces a flesh color of great use.

10. Fine Red Lead. By an improved method of purifying it, is rendered very bright, and stands well.

11. Of VERMILION the true native cinnabar is, by some artists, reckoned the best. It will not glaze, but is a fine color when glazed. It is ground with linseed oil, and should be used with drying oil.

13. PALE, or BRIGHT VERMILION, is esteemed much the most useful of the vermilions; as the effects of the others may be produced with this and good lake: but they cannot equal the brightness of this, by any mixture whatever.

14. INDIAN RED, is a strong, pleasant working color; but will not glaze well, and when mixed with white falls a little into the leaden tone. It is ground and used as lake; a mixture of red ochre and lake is occasionally a substitute for Indian red: nevertheless this is a useful and powerful color—indeed it is often rather too powerful, and especially while wet, in which state it differs from itself when dry: experience alone can justly foresee its true effects.

15. LAKE is a tender, sympathising deep red, but of no strong body, therefore it should be strengthened with Indian red. It is the best glazing color. It is ground with linseed oil, and used with drying oil.

17. CARMINE is a most beautiful crimson between lake and vermilion, is a fine working color, and glazes. It should be ground with nut oil, and used with drying oil.

18. BROWN OCHRE. A color allied to this may be made from yellow ochre, and other mixtures of the ochres.

19. SIENNA EARTH. A fine color, but little in use, except for landscape: in which this color burnt is of considerable service.

20. SIENNA EARTH BURNT, mixed with dark yellow and Indian red, makes a fine tint. The best sort burnt mixed with white and a little ultramarine makes an exquisite flesh color for skies, &c.

21. ANTWERP BROWN. This brown is not always kept in the color-shops, we shall therefore give here the manner of preparing it: it is valuable from its great depth of tone; it has great body, and will stand well, being produced by fire:—Put some good asphaltum into an iron ladle, set it over a *very* slow and feeble fire, taking care it does not boil over; keep it there till it will boil no more, but is become nearly a cinder; when cold, put to it the proportion of half an ounce of sugar of lead to half a pound of the calx, grind it in the strongest drying oil. It will work free, and dry well. N. B. This operation is called *burning* of asphaltum: asphaltum thus *burnt* is used in some compositions of etching ground—*vide* GROUND.

22. BROWN PINK is a fine glazing color, but of no strong body; in the flesh it should never join or mix with the lights, because this color and white are enemies, and mix to a warm dirty hue; for which reason their joinings should be blended with a cold middle tint. In glazing of shadows it should be laid before the other colors, that are to enrich it: it is one of the finishing colors, and therefore should never be used alone in the first painting. It is strengthened with burnt umber, and weakened with terra verte

is ground with linseed oil, and used with drying oil. A better color (in the opinion of some artists) and more certain, may be made from Antwerp brown and patent yellow.

23. Umber, burnt or unburnt, is especially useful in dead-coloring; it forms outlines, &c. well, or washes in a subject, &c. to advantage.

24. Burnt Umber is a very quick drier—is a fine warm brown, and a good working strong color: it is of great use in the hair, and mixes finely with the warm shade. It is highly commended by some artists, and highly blamed by others, as a *sullying* color.

25. Ultramarine is the finest blue known in the world: it stands even in the fire; it is tender, glazes beautifully, and never glares—it is a retiring color. From its great value should be used with the purest oils.

26. Prussian Blue is a fine blue, and a kind working color; but apt to be cold, and rarely or never stands well: it should be ground in nut oil, as grosser oils injure it. It should only be ground as wanted.

27. Lamp-black is a troublesome color, and should be burnt in an iron box till red hot; being a greasy color, and when mixed with the strongest drying oil, still requiring the assistance of a little sugar of lead, to force it to dry.

28. Ivory Black is far preferable to lamp-black, as it mixes much better with other colors; it is a good shade for deep blue. Ivory black and a little Indian red make a good general shadow color; it is ground with linseed oil, and requires the assistance of

of drying oil. Black is in its nature a cold and retiring color, except where by the force of contrast it comes forward, in which case it has great power.

TO SET A PALETTE.

A quantity of color being squeezed out of its bladder, on the centre of the pallette, work it into a proper form (with the addition of what oil is requisite) by the pallette-knife, and transplace it into its station on the upper part of the pallette, beginning with the lighter color, placed next the hand. From these originals compose a row of secondary tints, by mixing them together, in such proportion as appears most likely to suit the subject to be treated. A third row, still nearer to the subject, may easily be formed from the former.

To be somewhat more particular: We suppose the original colors placed in their order on the upper part of the pallette: To compose a second row of colors; take, for example, Lake and Naples yellow, to these we imagine white to be added; this composition we place in the second row, and so of the rest. If we wish for a lighter tint of the same colors, this is produced by an addition of white; or, perhaps, we want a red somewhat different, varying to light red, or to vermilion; these united, form a compound, admitted lower on the pallette: or, the secondary color, instead of red, requires yellow, or a different kind of yellow; or, in short, any other color which may be a departure from the first mixture. This combination is termed *breaking* the colors; its use is,

to

to prevent glare, and rawness, and its judicious exercise is a principal token of a masterly hand.

Nature never presents a pure, unmixed, strong, color, of any cast: but every color has an inclination to, or a tinge of, some other. A blue sky seems at first an exception, yet it is not so in fact; nor the color of the sea, nor the green of a field; for an innumerable variety of lights, reflexes, &c. are perpetually playing upon it, and thereby diversifying, debasing, and confusing, the original color. Even draperies vary in the colors of their lights and shades: the yellow light of the sun, the red light of a fire, a white light, &c. alter their appearances; and the deprivation of light in the shades, as the parts are more or less retired, is too obvious to need explanation; yet, even shadows are altered by reflexions from their neighbours.

It is evident, from this mode of reasoning, that to set a pallette well, requires no mean skill; and perhaps, if those who consider it as labour lost were to bestow more attention on it, their pictures would not fare the worse for it, we shall therefore give a variety of modes, as practised by the best masters:

Method of setting the Pallette as used by Chevalier Mengs, *and others.*

1. The principal light of flesh is composed of white and Naples yellow, or light ochre, or brown ochre, according to the complexion of the person; of these form the first and second tints.

2. White, light red, with a little yellow.

3. The same a little darker.

For

For Middle Tint.

1. White, black and yellow, tempered with a little red.
2. The same a little darker.

For Shadows.

1. Yellow, black, with a little red: in three degrees of strength. In all these shadow tints a little asphaltum may be used, in order to give a transparency and an harmony.

For a Warm Tint.

1. Naples yellow and lake.
2. Lake and vermilion.
3. Lake and light red.
4. Lake and terra de Sienna, burnt.

A little asphaltum must be used in all these warm tints.

Likewise make two other tints composed of black and white only—and two other tints of a purplish hue, which are composed by mixing a little vermilion with the black and white.

Another Method of setting the Pallette.

1. Light. Yellow ochre and white.
2. Ditto. The same a little darker.
3. Ditto. Light red, a little yellow ochre and white.

4. Light. The same a little darker.

For a very fine complexion add a little vermilion in the tints, No. 3 and 4.

5. Ditto. Vermilion and white is also necessary in the cheeks, &c.

6. Demi-tint. The same as No. 1, with peach black.

7. Second tint. Yellow and black, in the dead a little red.

8. Third tint. Terra de Sienna burnt, yellow and black.

9. Reflexion. To No. 3 add yellow ochre and brown ochre.

10. Ditto. To No. 4 add lake and burnt ochre.

11. Black. Lake, burnt ochre and terra de Sienna.

In setting a pallette it is good to observe to lay those colors near each other which harmonize: for example, first, white, then Naples yellow, next light yellow, dark yellow, light red, vermillion, terra de Sienna burnt, lake, blue, umber light and burnt, and black; also, observe in mixing the tints on the pallette to place them under in like harmony, beginning with the lightest of each, and so placing those of the next degree of strength one beside the other.

OF THE PRINCIPAL TINTS FOR PAINTING FLESH, MADE BY MIXTURE FROM THE PRINCIPAL COLORS.

1. Light Red Tint, of light red and white; it is the best conditioned of all colors, for a general ground for flesh. With this color, and the shade-tint, we should make out the flesh, like claro obscuro, or

 mezzotinto.

mezzotinto. We should also remember, that this color will grow darker; because it is naturally too strong for the white; therefore we should temper it by mixing some vermilion and white with it, in proportion to the fairness of the complexion; and though thus mixed, it may yet be called the light red tint, to avoid confounding the vermilion tint with it.

2. Vermilion Tint. Vermilion and white, mixed to a middle tint; it is the most brilliant light red; it agrees best with the white, light red, and yellow tints.

3. Carmine Tint, is carmine and white, mixed to a middle tint; it is the most beautiful red, for the cheeks and lips: it is a finishing color, and should never be used in the first painting.

4. Rose Tint, made of the red shade and white, mixed to a middle degree, or lighter: it is one of the cleanest and most delicate tints used in flesh, for clearing up the heavy dirty colors; and therefore, in changing, will sympathize and mix kindly.

5. Yellow Tint, is often made of Naples yellow and white; or of light ochre and white, which is a good working color. Remember, the ochre is too strong for the white; therefore it requires a little allowance in using it. It follows the light red tints, and should always be laid before the blues. If we lay too much of it, we may recover the ground it was laid on, with the light red tints.

6. Blue Tint, ultramarine and white, it is a pleasant working color: with it we should blend the gradations. It follows the yellows, and with them it makes greens; and with the red it produces purples.

ples. No color is so proper for blending down, or softening the lights into keeping.

7. Lead Tint, ivory black and fine white, mixed to a middle degree; it is a fine retiring color: is of great use in the gradations, and in the eyes.

8. Green Tint, is made of Prussian blue, light ochre, and white: this color will dirty the lights, and should be laid sparingly in the middle tints. It is most used in the red shadows, where they are too strong. It is of a dirty antipathizing nature.

9. Shade Tint is made of lake, Indian red, black, and white, mixed to a murrey color, of a middle tint; this is the best color for the general ground of shadows; therefore called the shade-tint: it mixes with the lights, and produces a pleasant clean color, a little inclined to the reddish pearl. As the four colors of its composition are of a sympathising nature, this mixture will be the same; and therefore may be easily changed, by the addition of other color.

10. Red Shade, is lake and a very little Indian red: it is a good working color, and a good glazer: it strengthens the shadows on the shade-tint; and receives, when it is wet, the green and blue tints agreeably. It is a good ground for all dark shadows.

11. Warm Shade, is made of lake and brown pink, mixed to a middle degree: it is a fine color for strengthening the shadows on the shade-tint, when they are wet or dry. We must take care that it does not touch the lights, because they will mix with it to a dirty snuff-color; and therefore should be softened with a tender cold tint.

12. Dark Shade is made of ivory black and a little Indian red only. This color mixes very kindly with the red shade, and sympathizes agreeably with the middle tints in the dead-coloring. It is a glazing color for the eye-brows and darkest shadows. It is an excellent shadow-color, and one of the finest working colors.

FIRST PAINTING.

THE COLORS AND TINTS NECESSARY FOR THE FIRST PAINTING OF FLESH.

1. Fine White.
2. Light Ochre—and its two tints.
3. Light Red—and its two tints.
4. Vermilion—and its tint.
5. A tint made of Lake, Vermilion, and White.
6. Rose Tint.
7. Blue Tint.
8. Lead Tint.
9. Green Tint.
10. Half-shade tint—made of Indian Red, and White.
11. Shade Tint.
12. Red Shade.
13. Warm Shade.

The finishing pallette for a fine complexion requires more; *viz.* carmine and its tint, lake, brown pink, ivory black, and Prussian blue.

The first lay of colors consists of two parts—one the shadows only, the other the lights.

The

The use of the shadows is to make out the drawing very correctly, with the shade-tint, as if it was to be done with this color only; and remember to *drive* the color, or lay it sparingly. The lights lay in with the light-red tint, in different degrees, as in nature; these two colors united produce a clean tender middle tint; to go over the darkest shadows with the red or warm shade, will finish the first lay.

The warm shade, if laid on the shade-tint, improves it to a warmer hue; but if laid instead of the shade-tint, it will dirty and spoil the colors it mixes with; if the red shade be laid first, instead of the shade-tint, the shadows would appear too red and bloody; the shade and light red tints are so friendly and delicate in their natures, that they will not dirty each other, though we are continually changing them.

To finish the first painting, improve the reds and yellows to the complexion, and after them the blues; observing, that the blues on the reds make purple, and the yellows green. The same method is to be understood of the shadows; but be sure to leave them clean, and not too dark; therefore allowance should be made in their grounds with the light red; because glazing will make them darker. A cloth of a dark, or bad hue, requires a strong body of color all over the shadows, such as will not sink into the ground, but appear warm, and a little lighter than the life, that it may be of the same forwardness to finish, as if it had been on a light ground; for, the business of dead-coloring is, that we leave it always in proper order for finishing.

The

The grounds of shadows, in the dead-coloring, should be such as will support the character of the finishing colors; clean, and a little lighter than the finishing colors, because the finishing of shadows consists, in a great degree, of glazing; all shadows and colors, that are to be glazed, should be done with colors of a clean solid body; because the glazing is then more lasting, and has a better effect.

The light red and white improved is proper for the first lay or ground; which should be always done with a full pencil of stiff color, brighter than the life, because it will sink a little in drying. The greater the body and quantity of color, and the stiffer it is laid, the less it will sink: every color in drying will sink, and partake, in proportion to its body, of the color it is laid on; all the lights of the flesh, if not laid on a light ground, must consequently change a little from the life, supposing there is no allowance made. The shade-tint for the shadows should verge upon the rose tint, in proportion as the complexion is delicate.

It is thought the great masters of coloring seldom sweetened, or softened, the colors; but in uniting the first lay, were very careful in preserving the brightness of their colors, and therefore did not work them below the complexion. The first painting should be left bright and bold, and the less the colors are broken the better: We should forbear using any colors that will prejudice them, and be contented to add what is wanted in the next painting.

SECOND PAINTING.

The second painting begins with laying on a very small quantity of poppy oil; then wipe it almost all off, with a dry piece of silk hankerchief, leaving only a moisture remaining from it.

The first lay of the second painting, is, scumbling the lights, and glazing the shadows: then finishing the complexion with the virgin tints, and improving the likeness, as far as we can, without daubing.

Scumbling, is going over the lights, where they are to be changed, with the light red tints, or some other of their own colors, such as will always clear and improve the complexion, with short stiff pencils; scumbling only such parts as require it.

The light red tint improved, is a good color for scumbling, and improving the complexion, in general. Where the shadows and drawing, are to be corrected, employ the shade tint, driving the color very stiff, and bare; the easier to retouch, and change it, with the finishing tints. Parts of the shadows should be glazed with some of the transparent shadow colors, such as will improve them, and come near to the life, taking care not to lay on too much, for fear of losing the hue of the first painting, the ground of which should always appear through the glazing. In uniting the lights and shades, they should not mix dead, and meally; the more the lights mix with the shades, the more meally those shades will appear.

Go over the complexion with the virgin tints, to improve the coloring to the utmost, both in the lights

lights and shadows. This should be done in the same manner as we laid them in the latter part of the first painting; with the reds, yellows, and blues; blending them with delicate light touches of the tender middle tints, without softening. We should leave the tints and their grounds clean and distinct, and be content to leave off while the work is safe and unsullied, leaving what is required farther to the conclusion; for, in attempting the finishing touches before the colors are dry, we lose the spirit, and the drawing, and dirty wherever we touch.

THIRD PAINTING, *or* FINISHING.

It is now supposed the complexion wants little more than a few light touches; therefore there will be no occasion for oiling before we begin. We begin with correcting all the glazing; first, where the glazing serves as a ground, or under part; then we determine what should be done next, before we do it, that we may make the alteration with one stroke of the pencil, thereby preserving both the glazing and the tints; but if we cannot lay such variety of tints, and finishing colors, as we intended, it is better to leave off while the work is safe, and in good order; because those few touches, which would endanger the beauty of the coloring, may easily be done, if we have patience to stay till the colors are dry; and then add those finishings with free light strokes of the pencil.

It is much easier to soften over strong tints when they are dry, than when they are wet, because we may

may add the very colors that are wanting, without endangering the parts that are dry. If any of the colors of the pallette want to be changed to the life, when we are painting, it is better to do it with the knife on the pallette, than with the pencil.

OF BACK-GROUNDS.

The principal colors necessary for painting back-grounds in portraiture, as walls, buildings, or the like, are white, black, Indian red, light and brown ochre, Prussian blue, and burnt umber, from which the eight principal tints are made, as follows:

1. PEARL is made of black, white, and a little Indian red.
2. LEAD, of black and white, mixt to a dark lead color.
3. YELLOW, of brown ochre and white.
4. OLIVE, of light ochre, Prussian blue, and white.
5. FLESH, of Indian red and white, mixt to a middle tint.
6. MURREY, of Indian red, white, and a little black, mixt to a kind of purple, of a middle tint.
7. STONE, of white, umber, black, and Indian red.
8. DARK-SHADE, of black and Indian red only.

Here the lead tint serves for the blues; the flesh tint mixes agreeably with the lead: the murrey is a good blending color, and of use where the olive is too strong. The umber, white, and dark shade produce a variety of stone colors: the dark shade and umber, used plentifully with drying oil, make a warm shadow color. These colors may be

laid with drying oil, because they mix and set the better with the softener.

Begin from the shadowed side of the head, and paint the lights first; then, the gradations and shadows, with a large, stiffish, tool, sparingly, with the dark shade and white, a little changed with such colors as will give it the hue required, but very near in regard to tone and strength; leaving them like mezzotinto.

The dark and warm shadows should be laid before the colors that join them with the dark shade and umber, because, if those colors were laid on first, they would interrupt and spoil the transparency, which is their greatest beauty. The more the first lay is drove, the easier and better we may change it with the finishing tints; therefore we may lay them with the greater body.

As we heighten and finish the lights, we do it with warmer colors; accompanied with tender cold tints. The lightest part of the ground is always nearest to the shadowed side of the head; and this part governs all the rest; it should be painted with a variety of light, warm, clear colors, which gradate and lose their strength imperceptibly. We must take care not to cover too much of the first lay, but consider it as the principal color.

When the lights are well adapted to support the head, it is easy to introduce whatever kind of shadows we find most proper; then soften and blend the whole, the tints will sink, and lose a little of their strength and beauty in drying. Grounds, walls, &c. may be finished at once painting; or afterwards.

terwards glazed with a little of the dark shade and drying oil, drove very bare; and their hue improved with a few light touches of the color that is wanting. The dark shadows may also be strengthened and improved by glazing, after the subject is nearly finished, for fear of making them too strong.

Curtains should be dead-colored when we paint the ground; with clean colors, of a hue near to the intended curtain, such will support the finishing colors, with a tender sort of keeping, in regard to their tone in the lights, but much softer in the shadows, mixing and breaking the whole with the colors of the ground, as Fresnoy says, "bodies that are back in the ground, should be painted with colors allied to those of the ground itself." If we cannot set the folds the first painting, we should leave the masses of light and shadow, in regard to the keeping of the picture, broad and well united together, such as may appear easy to finish on. The colors of the landscape, in back-grounds, should be broken and softened, with those of the parts which join them: hereby bringing them into keeping, so that the parts do not stare, nor cut at their extremities.

The sky should be broke with the lead, and the flesh, tints: the murrey tint is of great use in the grounds of distant objects; the umber and dark shade in the near grounds: the greens should be more beautiful than we intend them, because they will fade, and grow darker. After all is painted, we should go over the whole very lightly with the softener.

OF PAINTING DRAPERIES.

The right method of painting draperies in general, is, to make out the whole, with three colors only: *viz.* the lights, the middle tint, and the shade tint.

The middle tint should be very near to the general hue of the drapery: and the shade tint dark enough for the general hue of the shadows.

The lights should rather incline to a warmish hue: the middle tint should be made of friendly working colors, such as will mix of a clean tender cool hue, and the shade tint should be made of the same colors as the middle tint, only with less light; with these three colors we should make out the whole like mezzotinto, before we add any of the reflexions, or finishing tints.

The reflexions of draperies, &c. are generally productions of their own, and lighter than the shadows on which they are found; being produced by light, they will have a light, warm color, mixed with the local color that receives them. Here it will be necessary to observe the general method in managing the colors of the first lay, and those of the reflexions and finishing tints.

In the first lay, the high lights should be laid with plenty of stiff color; then shaped, and softened into character with the middle tint, very correctly. Where the gradations of the lights are slow, as in the large parts, it is proper to lay the middle tint first at their extremities, with a tool that will drive the color,

color, and leave it sparing: because, the lights will mix, and lie the better, upon it. Next make out all the shadows with the shade tint drove bare. After this, the middle tint, which fills up, and serves as a kind of second lights and gradations, should be managed very nicely, to produce character, without touching any of the high lights which finish the first lay.

Reflexions and finishing tints, are in general antipathies to the first lay; they will, without great care, dirty the colors on which they are laid; and therefore should be laid with a delicate light touch, without softening: if overdone, it may be recovered with the proper color of the part, either directly, or when dry.

When the color of the cloth is very improper for the ground of a drapery, we should change it with those colors which are most likely to improve, and to support, the finishing colors. This method will preserve them in their greatest lustre. In dead coloring, the lights, and shades, need only hint at the shape and roundings of the figure, but if we have a design to work from, it will be proper to make all the large and principal parts in their places, with a clean color, lighter than the intended drapery, though in general of the same hue, while the shadows are no darker than a middle tint: these should be mixed and broken in a tender manner; then softened with a large tool, that nothing rough, or uneven, be left to interrupt or hurt the character of the finishing colors.

Instances of particular kinds of Drapery.

WHITE SATTIN.

All whites should be painted on white grounds, laid with a good body of color; by reason this color SINKS more into the ground than any other.

There are four degress of colors in the first lay to white sattin: 1st. The fine white for the lights. 2d. The first tint, made of fine white and a very little ivory black, mixed to an exact middle degree between the white and the middle tint. This color follows the white, and with this, we should give the lights a character, taking care that this tint appear distinctly between the white, and the middle tint. 3d. The middle tint should be made of white, black, and a little Indian red, mixt to a beautiful, clear color, of a pearly hue. Remember to allow for the red hue changing a little toward lead color. If there be occasion to make any part of the middle tint lighter, we should do it with the first tint only. This color should also be laid, sparingly, before the white, in the lights that happen in the middle tints and shadows; on which we should lay the white with one light touch, not covering all the part made with the first tint: but, preserving a softening edge, or border, between the white and the middle tint. 4th. The shade tint should be made of the same color as the middle tint; but with less white, so that it be dark enough for the shadows in general; with which we should make out the shadows into character.

In

In the reflexion and finishing tints of white sattin: brown ochre, mixed with the color of the lights, is a useful color, in general, for all reflexions produced from their own colors. Accidental reflexions are made with the color of the parts from whence they are produced, and the local colors that receive them. Two reflecting tints are wanted for draperies, in general, one lighter than the middle tint, the other darker. These may be changed on the pallette with the first, and the middle tints, as occasion requires, or be lightly broken on the part that receives them: but this last method is not so safe as the other. The tint for blending the dark shadows to the mellow tender hue, is made with the shade tint and a little brown ochre; laid on very sparingly, with soft light touches, for fear of making them heavy. If it be overdone, we may recover it with the color it was laid upon.

We often see a little blue used in the first tint of white sattin. When a warm, or dirty color, is mixed with a clean light one, they will form a dirty color. It is the want of the red hue which makes white sattins often appear like pewter.

BLUE SATTIN.

Blue sattin is made of Prussian blue and fine white.

The best ground for blue is white for the lights, and black and white for the shadows.

The first lay of colors for blue is divided into three degrees:

1st. The middle tint of a beautiful azure. 2d. The color for the lights about a middle degree between that, and white. 3dly. The shade tint, dark enough for the shadows, in general. The broad lights should be laid with plenty of color, and shaped to character with the middle tint, before we lay on any other colors. The less the colors are mixed, the better they will appear, and stand; for the lights of blue should be managed with as much care as those of white sattin. Next follows the rest of the middle tint, and then the shadows. The more we drive the shade tint, the better it will receive the reflexions and finishing tints. The shadows should be strengthened, and blended, with ivory black, and some of their own color, mixt into a tender mellow hue.

The reflexions are made as those of white sattin, with ochre and some of the lights: which should be done at once. The shadows, when dry, may be improved with the colors they were made of. The Prussian blue best to be used, is that which looks the most beautiful before it is ground: the sooner it is used after it is ground, the better.

Velvet may be painted at once. The method is, to make out the first lay with the middle tint, and shade tint; on which place the high lights with light touches, and finish the shadows as those of sattin; but the nearest imitation of velvet is procured by glazing; having first prepared a ground, or dead coloring, with such colors as will, when dry, bear out and support the glazing color. The glazing color is, of a fine transparent quality, used simply with oil only;

so

so that whatever ground it is laid on, the whole may appear distinctly through it. The best ground for blue is made with white and ivory black: the white is for the high lights, which, with the middle tint and shade tint, makes out the first lay like mezzo-tinto. The middle tint should be lighter, in proportion to the glazing, because that will make it darker. It is often necessary to cover all but the high lights with a glazing, laid with less quantity than if it was to be done once only. If any of it touch the lights, we should wipe it off with a clean rag. The very high lights should be improved, and made of a fine white, and left to dry. The glazing color is Prussian blue, ground very fine with nut oil; and should be laid with a large stiffish tool, that will drive the color as occasion requires. On the last glazing strengthen and finish the shadows.

We observe, in this instance, that glazing the middle tint, which is made of black and white, will not produce a color so blue, as if it had been prepared with Prussian blue and white; yet this color will preserve the beauty of the lights, in their perfection, by reason of its tender obscure hue, when the blueness of the other would diminish them. This method of glazing blue is the general rule for all glazing.

The greatest fault in coloring draperies of any kind, is, painting the shadowed parts with strong glaring colors, which destroy the beauty of the lights. This is not only the reverse of art, but of nature, whose beauty of color is always diminished in proportion to the light: for this reason we should blend, and soften,

the shadows, with such friendly colors as will agree with their local character, and the requisite degree of obscurity.

In glazing blue, the lights may be glazed with ultramarine, though the other parts are done with Prussian blue, hereby saving a great quantity of that valuable color.

Though this general method of painting sattins, is, to make the first lay of colors with three degrees, or tints; yet, in using them, they produce two more: for, the mixing of two different colors on the cloth, makes another, of a middle tint between them: so do the lights and middle tint, and the middle and shade tint: the first mixture answers to the first tint in white sattin; and the last is a sort of gradation, or half shade.

If the lights and middle tint mix to a beautiful clean color, of a middle hue between both, there will be no occasion for a color to go between them, as in the blue sattin: but if in mixing, they produce a tint inclining to a dirty warm hue, then there must be another made of a sympathizing nature, to be laid between them, to preserve the beauty of the lights.

It is necessary to understand these principles of the first lay of colors, as comprehending the general rule of coloring, and that on which the practice of excellent coloring depends.

SCARLET AND CRIMSON.

A light yellow red, made of light ochre, light red, and white, is the proper ground for scarlet; the shadows are, Indian red, and, in the darkest parts, mixed with a very little black.

The second painting should be lighter than we intend the finishing color to be in proportion to the glazing, which will make it darker.

The high lights, are vermilion for cloth, and vermilion and white, for sattin, and velvet; the middle tint is vermilion, with a very little lake, or Indian red; the shade tint is Indian red and lake, with a little black in the darkest shadows. The difference between scarlet and crimson, is, that the high lights of crimson are whiter, and the middle tint is made darker. Their reflexions are made with light red and vermilion. The high lights should be laid and managed in the same manner as those of the blue, for fear of dirtying them; and sometimes they require to be touched over a second time, before we glaze them. The more the colors of the second painting are drove, the easier and better they may be managed to character: but the high lights should have a good body of color, and be left with a delicate light touch. After it is well dry, we should finish by glazing the whole with fine lake, and improve the reflexions and shadows. Scarlet requires but a very thin glazing. It is better to glaze crimson twice over, than to lay too much at once painting.

PINK COLOR.

There are two different methods of painting a pink color: one, by glazing; the other, by a body of colors at one painting. The same grounds do for both; which should be, a whitish color, inclining to yellow, for the lights; and Indian red, lake, and white, for the shadows.

The second painting, for the glazing, is done with the same colors and a little vermilion, for the reflexions; and vermilion and white for the high lights; when dry, glaze it with fine lake, then break and soften the shadows into character, and harmony, directly.

The other method is, to make the high lights with carmine and white; the middle tint with lake, white, and a little carmine; and shadows with lake and Indian red, with a little vermilion for the reflexions. But the shadows require to be broken with some tender obscure tint.

YELLOW.

The ground for yellow should be a yellowish white, for the lights, and a mixture of the ochres, for the shadows.

There are the same number of tints in the yellow, as in the white, sattin; the method of using them is the same. The lights are made with king's yellow, ground with clean, good, drying oil. The first tint is light ochre, changed with a little of the pearl tint made

made of the dark shade and white: which should be laid, and managed, as the first tint in white sattin. The middle tint is, a mixture of the light and brown ochre, softened with the pearl tint. The shade tint is made with brown pink and brown ochre. These belong to the first lay.

The reflexions are light ochre; sometimes, in the warmest parts, mixed with a little light red; the shadows are strengthened with brown pink and burnt umber.

GREEN.

The proper ground for green is, a light yellow green; made of light ochre, a little white, and Prussian blue, for the lights; and the ochres, brown pink, and Prussian blue, for the shadows.

The finest green for drapery, is made of king's yellow, Prussian blue, and brown pink. The high lights are, king's yellow and a very little Prussian blue; the middle tint has more Prussian blue; the shade tint is made with some of the middle tint, brown pink, and more Prussian blue: but the darkest shadows are brown pink and a little Prussian blue. The lights and middle tint should be managed in the same manner as those of the blue sattin. The shade tint should be kept entirely from the lights, because the brown pink that is in it, will, in mixing, dirty them, as the black does those of the blues; they dry a little darker than they appear when wet. The king's yellow should be ground with good drying oil; for, the longer it is in drying, the more it will change

change and grow darker: and the sooner it is used, the better it will stand. It is proper to have two sorts of king's yellow, one very light for the high lights of velvet.

CHANGEABLE COLORED SILKS.

Changeable colors have four principal tints, viz. the high lights, middle tint, shade tint, and reflected tint.

The art lies in finding the exact color of the middle tint, because it has more of the general hue of the silk than any of the others. The shade tint is of the same hue with the middle tint, though dark enough for the shadows. The high lights, though often very different from the middle tint, should be of a clean, friendly, working color, that will, in mixing with it, produce a tint of a clean sympathizing hue.

The method of painting silks is to make out the folds with the shade tint, and then fill them up in the lights with the middle tint. This first lay should be done to satisfaction before any other colors are added; the stiffer the middle tint is used, the better the high lights may be laid on it. The reflected tint falls generally on the gradating half shades, and should be laid with tender touches, sparingly, for fear of spoiling the first lay.

This method of painting answers to all the colored silks, as well as changeable, with this difference only, that the plain colors require not so much art as the changeable do in matching the tints. The last part of

of the work is the finishing, and strengthening the shadows with an obscure tint, inclining to a mellowish hue: such as will not catch the eye, and interrupt the beauty of the lights.

BLACK.

The best ground for black is light red for the lights; and Indian red and a little black for the shadows.

The finishing colors are, for the lights, black, white, and a little lake. The middle tint has less white, and more lake and black. The shade tint is made of an equal quantity of lake and brown pink, with a very little black.

The method of painting black is very different from that of other colors; for, the principal thing in them, is to leave the *lights* clean and brilliant—but in black, it is to keep the *shadows* clear and transparent. Therefore we should begin with the shade tint, and glaze over all the shadows with it. Next, lay in the darkest shadows with black, and a little of the shade tint, very correctly. After that, fill up the whole breadth of lights with the middle tint only. All which should be done exactly to the character of the drapery, and then finish with the high lights.

Here observe, that the ground being red, will bear out and support the reds, which are used in the finishing colors: the lake in the lights takes off the cold hue. If the shade tint was of any other color than a transparent warm hue, the shadows would consequently be black and heavy; because no other

colors, equally with lake and brown pink, can preserve the warm brilliancy, which is wanting in the shadows of the black. Black is of a cold heavy nature, always too strong for any other color; therefore it requires an allowance in using it. There will be a few reflexions in sattin, which should be added as those of other colors; they should be made of strong colors, such as burnt umber, or brown ochre, mixt with a little of the shade tint.

Though these grounds mentioned for draperies, are necessary for the principal, and nearest, figures in a picture, for a portrait, or the like; yet figures placed deeper in the picture, and such as are behind the principal, or front, figures, should always be fainter in the tints of their grounds, in proportion to their local finishing colors, and their just effects.

LINEN.

The colors used in painting linen are the same as those in white sattin, except the first tint; which is made of white and ultramarine ashes, instead of the black, mixt to a very light blueish tint.

In the dead coloring care should be taken that the grounds be laid white and broad in the lights: the shadows are composed of black, white, and a little Indian red, like the middle tint of white sattin. These should be left very light and clean, to support the finishing colors.

In the second painting the lights are glazed, with a stiff pencil and fine white only, drove bare, with little oil: the shadows scumbled with poppy oil,

and

and some of the color they were made of. The middle tint of white sattin is the best color for the general tint of the shadows. With this, and white, in different degrees, make out all the parts to their character, with free light touches, without softening. Then with a large long pointed pencil, and fine white, lay the high lights very nicely, at a touch. After this the fine light blueish tint, mixed light, is laid in the tender gradations very sparingly and lightly, without filling them up.

The first lay should be left clear and distinct: the more it appears the better. It is the overmixing and jumbling all the colors together, which spoils the beauty of the character; therefore it is better to let it dry before we add the reflexions and finishing tints.

This method of letting the beautiful clear colors dry, before we add the warm, reflecting, and harmonizing tints, prevents them from mixing with, and dirtying, each other.

The principal blending colors used in the reflexions are the yellow tint, green tint, and rose tint; which last is made of lake, Indian red, and white. The dead coloring should be as white as we intend the finishing colors to be, by reason they will sink a little, in proportion to the color of the cloth, which the glazing with pure white, only, will recover.

OF PAINTING LANDSCAPES IN OIL.

The principal colors used in landscapes are:

1. Fine White.
2. Common White.
3. Fine Light Ochre.
4. Brown Ochre.
5. Brown Pink.
6. Burnt Umber.
7. Ivory Black.
8. Prussian Blue.
9. Ultramarine.
10. Terra-vert.
11. Lake.
12. Indian Red.
13. Vermilion.
14. King's Yellow.

The principal tints used in landscapes are:

1. Light ochre and white.
2. Light ochre, Prussian blue, and white.
3. Light ochre and Prussian blue.
4. The same, darker.
5. Terra-vert and Prussian blue.
6. Brown pink and Prussian blue.
7. Brown pink and brown ochre.
8. Brown pink, ochre, and Prussian blue.
9. Indian red and white.
10. Ivory black, Indian red, and lake.

The

The colors necessary for dead coloring, are common white, light ochre, brown ochre, burnt umber, Indian red, ivory black, and Prussian blue.

The principal colors and tints for painting the sky, are fine white, ultramarine, Prussian blue, light ochre, vermilion, lake, and Indian red.

The tints are a fine azure, lighter azure, light ochre and white, vermilion and white, and a tint made of white, a little vermilion, and some of the like azure.

LANDSCAPES should be painted on a sort of tanned leather-colored ground, which is made of brown ochre, white, and light red. This color gives a warmth to the shadow colors, and is very agreeable and proper for glazing.

SKETCHING, or rubbing in the design, is the first work of the picture.

This should be done with burnt umber, drove with drying oil, and a little oil of turpentine, in a faint, slight, scumbling, free manner, as we shade with Indian ink on paper, leaving the color of the cloth for the lights, and leaving no part of the shadows so dark as we intend the first lay, or dead coloring, which is to be lighter than the finishing colors. Though the foliage of the trees is only rubbed in, with a faint sort of scumbling, yet the trunks and bodies should be in their proper shapes, with their breadths of light and shadow. Buildings should be done in the same manner, leaving the color of the cloth for their lights: the figures on the fore-ground, if they are determined, should also be sketched in the same method, and then the whole left to dry.

OF DEAD COLORING.

Let the first lay, or dead coloring, be without any bright, glaring, or strong, dark, colors; so that the effect is made more to receive and preserve the finishing colors, than to shew them in the first painting.

The sky should be done first; then the distances, working downward to the middle group, from that to the fore-ground, and to the nearest parts; all parts of each group, as trees, buildings, &c. should be painted with the group they belong to.

The art in dead coloring, is, to find the two colors, which serve for the ground of the shadows in general, the sky excepted, and the method of using them with the lights: the first of which is, the dark shade with a little lake in it; the other is, burnt umber: these should be changed a little to the natural hue of the objects, and then laid and drove with drying oil, in the same manner as we shade with Indian ink, which is a scumbling kind of glazing; and as such they should be left; otherwise they will be dark and heavy, and would be entirely spoiled for the finishing glazing. Both these colors mix and sympathize agreeably with the lights, but should be laid before them.

When the landscape is designed, begin with the sky, which should be laid with a good body of colors, and left with a faint resemblance of the principal clouds; more in the manner of claro obscuro, than with finishing colors: the whiter it is left, the better it will bear out and support them. The dis-

tances

tances should be made out faint and uncertainly with the dark shade, and some of their lights, in different degrees; and laid so, as best to find and shew their principal parts. Advancing into the middle group, we introduce, by degrees, the burnt umber in the shades: all the grounds of the trees being laid, or rubbed in, enough only to suggest an idea of their shapes and shadows faintly. The grounds of their shadows must be clean, and lighter than their finishing colors, such as will support their character, and seem easy to finish on.

In painting the lights, it is better to incline more to the middle tint, than to the high lights; and to leave them with a sufficient body of clean colors, which will receive and preserve the finishing colors the better; which may be done with a few tints.

SECOND PAINTING.

Begin with the sky; lay in the azure and colors of the horizon; then soften them; after that, lay in the general tint of the clouds, and finish on it with the high lights, and the other tints that are wanting, with light, tender, touches; then, soften the whole very lightly. The finishing of the sky should be done at once painting, because the tender character of the clouds will not match so well when dry, as when the whole is wet. The stiffer the azure, and colors of the horizon, are laid, the better the clouds may be painted upon them.

The greatest distances are chiefly made with the color of the sky; as they grow nearer and darker, glaze and scumble the parts very thin, with such

glazing

glazing shadow colors as come nearest to the general hue of the group the objects are in: so that the first painting, or dead color, should be seen through it; on this add the finishing colors.

If this glazed ground be properly adapted to the object and place, it will be easy to find the colors which are wanted for the lights, and for the finishings. That we may not spoil the glazing, we should be very exact in making those colors on the pallette, and in laying them with light free touches.

Here it may be proper to say something of the most useful glazing colors.

Lake, terra-vert, Prussian blue, and brown pink, are the four principal. The more they are managed like Indian ink, and the more distinctly they are left, the better their transparent beauty will stand, and appear. After these, burnt umber is a good glazing warm brown, used in the broken grounds and nearest parts; but the most agreeable color for the darkest shadows, is the dark shade improved with lake, drove with drying oil: it mixes harmoniously with the lights, the shadows, the trunks and the bodies of trees, and the buildings.

The ground of the objects should be made out, with such glazing shadow colors, as seem nearest to the natural hue of the object, in that situation; and as the principal glazing colors themselves, are often too strong and glaring, they should be a little softened by such colors as are near to themselves and the objects: thus, if in the distances, the terra-vert and azure, which are their principal glazing colors, may be improved and made lighter, with some of the sky

tints: and as the distances come nearer, with the purple. As we get more into the middle group, the terra-vert and Prussian blue may be varied with some of the green tints, made without white, for white is the destruction of all glazing colors. As we approach the first group, there is less occasion for changing them; but the fore-ground and its objects require all the strength, and force, of glazing, which the colors are capable of producing.

After this glazing ground, we should follow with strengthening the same in the shadows and darkest places, in such manner as will seem easy to finish.

The colors that come next, for finishing, are in the degree of middle tints: these should be carefully laid over the greatest breadth of lights, in such manner as not to spoil, and cover too much of, the glazing: with a good body of color, as stiff as the pencil can agreeably manage, to character. The colors of the middle tint should be clean and beautiful, finishing all the second painting downward, from the sky, through the middle group. At the first group, all the objects should appear perfectly finished: their under or distant parts should be finished, before any of the other which are nearer, down to the last, and nearest, objects of the picture. Where it happens, that painting one tree over another does not please, forbear the second, until the first is dry. Thin near trees, of different colors, will do better, if we let the under parts dry before we add the finishing colors.

THE THIRD AND LAST PAINTING.

If oiling be necessary, lay the least quantity that can be, with a stump tool, or pencil, proportioned to the place that is to be oiled; then wipe the place that is oiled with a silk handkerchief, leaving no more oil than is proper for the purpose.

When finishing any objects, we should use a great variety of tints, all nearly the same color, but most of all, when finishing trees; as this gives a richness to the coloring, and contributes to produce harmony. As the greens will fade, and grow darker; it is necessary to improve, and, in some degree, to force them, by making an allowance in using them so much the lighter; the same reason applies to the glazing; which, if over loaded, will be dull and heavy, and consequently will grow darker.

The method for painting near trees, is, to make the first lay very near to nature, though not quite so dark, and to follow it with strengthening the shadows; then the middle tints; and last of all, lay the high lights and finishing colors: but all this cannot be done, as it should be, at once painting. The best way is to do no more than the first lay with the faint shadows, and leave it to dry. Then improve the middle tints and shadows, and let them dry.

The conclusion is, adding all the lights and finishing colors, in the best manner. This method of leaving the first and second part to dry separately, not only makes the whole easier, and more agreeable, but leaves the colors in the greater perfection; because,

because, most of the work may be done with scumbling and glazing, and some parts without oiling. The lights also may be laid with a better body of color, which will not be mixed and spoiled with the wet ground: what is said of trees, answers to all kinds of shrubs, and bushes.

The figures in a landscape are the last work of the picture; those in the fore-ground should be done before those in the distances; the shadows of the figures should be of the same hue, or color, with those of the group, or place, wherein they are situated.

As a picture is generally intended to be viewed at a distance, the artist should frequently consider his performance at, or near a similar situation; since whatever loses its effect at that distance, however neatly executed, is labour lost.

The shadows, if large, may approximate nearly to the same tone according to their situations, and may be thin of color; but the lights should be distinct, bold, spirited, and will not suffer, even if loaded with color; on the contrary, it will contribute to durability.

To use only one tint to one color, promotes cleanness and freshness of the colors; too much mixing, teases and injures them.

If a teint different from what are on the pallette, is wanted while at work on a picture, it is better to mingle the colors proper to compose it on the pallette with the knife than with a pencil.

There is in some persons a strange predilection for smooth pictures in oil; this, however, is far from

being meritorious, unless a picture be very small: but in larger pieces a bold and free pencil shews to advantage, especially in the lights, in the smart touches, and firm markings and drawing.

In general, colors look more brilliant while wet with oil, than when they are dry; a little observation will accustom the student to this circumstance.

It is usually the too great quantity of oil (especially of the grosser kinds) which occasions the decay of the colors: and, it is observable, that pictures generally begin to fade in the darker parts, and in the glazings, where the color is thin; the lights maintaining themselves long after those colors are obliterated.

A color cannot have a worse property than that of a tardy dryer, as it holds what dust unavoidably falls on it, and consequently sullies the beauty of the tints; some artists, aware of the bad qualities of the oils in use, make too free with turpentine to work thin, but this not only leaves the picture dead, but carries off part of the force in evaporation.

To know when an oil picture is dry, breathe firmly upon it; if it take the breath, it is safe. It is proper to let the first coat of color be thoroughly dry, before a second is applied; this should be carefully attended to in winter.

The pencils, when done with, should be cleaned by spirits or oil of turpentine; or, if meant to be laid by for a time, they may be washed with soap. The pallette should be constantly cleaned.

OF CLEANING OF PICTURES.

Water is the first material and of the most general use in cleaning pictures. This will remove many kinds of glutinous bodies, and foulnesses; such as sugar, honey, glue, and many others; and it will also take off any varnish of gum arabic, glair of eggs, or isinglass, and is therefore the greatest instrument in this work; it may be used without any caution with respect to the colors, as it will not in the least affect the oil which holds them together.

Olive oil, or butter, though not generally applied to this purpose, through an ignorance of their efficacy, will remove many of those spots or foulnesses, which resist even soap, as they will dissolve or corrode pitch, rosin, and similar bodies, and they may be used very freely, not having the least effect on the oil of the painting, nor the dangerous effects of spirit of wine and oil of turpentine.

Wood ashes, or (what will better answer the purpose, when used in a proper proportion) pearl ashes, being melted in water, make a proper dissolvent for most kinds of matter which foul paintings, but they must be used with great discretion, as they will touch or corrode the oil of the painting, if there be no varnishing gum or resin over it, by very little rubbing; the use of them, or scope is, however, in many cases unavoidable, and in general they are the only things employed for this purpose.

Spirit of wine, as it will dissolve all the gums and gum resins, except gum arabic, is very necessary

for the taking off from pictures varnishes composed of such substances; but it corrodes also the oil of paintings, and softens them in such a manner as to render all rubbing dangerous, while they are under its influence.

Oil of turpentine will dissolve likewise some of the gums used for varnish, but spirits of wine will in general much better answer the purpose: there are, however, sometimes spots of foulness which will gave way to the spirit of turpentine, but resist most other substances used for this purpose; it may, therefore, be tried where every thing else appears to fail, but even then very sparingly, and with great caution, as it will very soon act even on the dry oil of the painting.

Essence of lemons is of the same dangerous tendency with oil of turpentine, but is a much stronger dissolvent, and should therefore only be used in the most desperate cases, where spots seem indelible by all other methods; spirit of lavender and rosemary, and other essential oils, have the same dissolving qualities as essence of lemons, but they are in general dearer, and some of them too powerful to be trusted near the colors.

When paintings appear to have been varnished with those substances that will not dissolve in water, (which is seldom done by painters who are acquainted with the present practice, as they destroy the more delicate tints and touches of the painting,) they are, however, very easily and safely removed by the following method:

" Place your picture or painting in an horizontal situation, and moisten, or rather flood by means of a sponge the surface of it with very strong rectified spirits of wine; but all rubbing beyond what is necessary must be avoided. Keep the painting moist by adding fresh quantities of the spirit for some minutes, then flood the surface copiously with cold water, with which the spirit and such part of the varnish as it has dissolved may be washed off; but in this state of it all friction, and the slightest violence to the surface of the painting, would be very detrimental. When the painting is dry, this operation may be repeated at discretion, until the whole of the varnish is taken off.

To prepare the pearl and wood-ash ley, used in cleaning pictures, let an ounce be dissolved in a pint of water, to be stirred frequently for half a day; then to be decanted from the settlings.

N. B. This mixture is said to enliven the Brazil wash.

To make a stronger ley of the same, let two pounds of wood-ashes and three quarts of water, be managed as just directed, and evaporated (or even boiled) to one quart, or a less quantity, as you find it acrid to your taste. A strong ley is made by pouring hot water on a quantity of ashes, and when it has filtered through them, collect it for use.—These leys are to be used warm with a sponge, and with the caution just directed. When thick spots are not easily removed, a strong soap-lather may be of use, not suffering it to touch any other part of the picture but the spot it is to be engaged with.

For

For using spirits of wine and other dissolvents, the picture is to be laid on a table, and flooded with the liquor, or well dabbed with a sponge, so as to keep the picture very moist. Add fresh ley, &c. as wanted, then with cold water wash off the whole.

All dissolvents must be washed off with plenty of water, and should it be necessary to use any of them again, take care that the painting is quite dry; this must be attended to at every repetition.

All spots, &c. of dirt are attached to a picture, either before it is varnished, or during its being varnished, (in which case they dry with the varnish) or after the varnish is dry. If the latter, plenty of warm water generally succeeds; but if it be damaged while varnishing, or before that operation, the coat of varnish must be removed; then the spot cleaned, and the whole picture be re-varnished.

It appears, from this observation, that it is of consequence to set pictures, while drying, in a place free from dust, &c. since whatever dries with the colors cannot be removed.

It sometimes happens that a picture grows dull and obscure, and it may be necessary to revarnish it; this may be very safely done, after inspecting whether the first varnish be clean, &c.

OF TRANSFERRING PICTURES.

The art of removing paintings in oil from the cloths on which they are originally done, and transferring them to new ones, is of great use. The method is as follows:

Let the decayed picture be cleansed of all grease that may be on its surface, by rubbing it very gently with crum of stale bread, and then wiping it with a very fine soft linen cloth. It must then be laid, the face downwards, on a smooth table covered with fan paper, or India paper; and the cloth on the back must be well soaked with boiling water, till perfectly soft and pliable. Turn the picture face upwards, and having stretched it evenly on the table, pin it down with nails at the edges. Having melted a quantity of glue, and strained it through a flannel cloth, spread part of it on a linen cloth of the size of the painting; when this is set, lay another coat over it; when this is become stiff, spread some of the glue, moderately heated, over the face of the picture, and lay over it, in the evenest manner possible, the linen cloth already prepared, and nail it down to the picture and table. Then expose the whole to the heat of the sun, in a place secure from rain, till the glue be perfectly dry and hard; when this is the case, remove the picture and linen cloth from the table. Turn the picture with the face downwards, and let it be stretched and nailed to the table as before; then raise round its edge a border of

wax as in biting of copper-plates, into which pour a corroding fluid, as oil of vitriol, aqua-fortis, or spirit of salt, but the last is to be preferred; dilute either of these with water, to such a degree, that they may destroy the threads of the original canvas, or cloth, of the picture, without discoloring it. When the corroding fluid has answered this purpose, drain it off, and wash away the remaining part by quantities of fresh water. The threads of the cloth must be then carefully picked out till the whole be taken away. The reverse surface of the painting, being thus wholly freed from the old cloth, must be well washed with water, and left to dry. In the mean time, prepare a new piece of canvas of the size of the painting; and having spread some hot glue, purified as before, and melted with a little brandy or spirit of wine, over the reverse of the painting, lay the new canvas evenly upon it, while the glue is hot, and compress them together with thick plates of lead, or flat pieces of polished marble. When the glue is set, remove these weights, let the cloth remain till the glue is become perfectly dry and hard. Then the whole must be turned the other side upwards, and the border of wax being replaced, the linen cloth on the face of the painting must be destroyed by means of the corroding fluid; because the face of the painting is defended only by the coat of glue which cemented the linen cloth to it. The painting must then be freed from the glue by washing it with hot water. The painting may afterwards be varnished, and if the operation be well conducted,

conducted, it will be transferred to the new cloth in a perfect state.

When the painting is originally on wood, the surface of it must be covered with a linen cloth, cemented to it by means of glue, as already directed. A proper table being then provided, and overspread with a blanket, or thinner woollen cloth, laid on in several doubles; the painting must be laid upon it the face downwards, and fixed steady; the board or wood on which it was done, must then be planed away, till the shell remains as thin as it can be made, without damaging the paint under it. The process is the same as already given for the front.

When a picture is by accident torn, or otherwise injured, it is repaired, by placing the separated parts as nearly in their first state as possible, then attaching, by a strong glue, a piece of cloth, of a proper shape and size, to which the threads of the torn parts firmly adhering, retain their situations. The place in the picture where the rent is, must then be very exactly colored as before, so as effectually to conceal the damage.

When a fresh cloth is applied behind a picture, to cover the back throughout, and to strengthen the original canvas, it is termed, lining a picture, and very much contributes to its preservation; especially, if the canvas be ancient, or thin in its substance.

OF ENCAUSTIC, OR PAINTING IN WAX.

Miss GREENLAND'S *Method of making a Composition for Painting in imitation of the Ancient Grecian Manner.*

Put into a glazed earthen vessel 42 oz. of gum arabic and 8 oz. of cold spring water; when the gum is dissolved, stir in 7 oz. of gum mastich, which has been first washed, dried, picked, and beaten fine, which is very soon done: set the earthen vessel, containing the gum water and gum mastich, over a moderate fire, continually stirring and beating them hard with a spoon, in order to dissolve the gum mastich. When sufficiently boiled, it will no longer appear transparent, and will be stiff, like a paste; so soon as this is the case, and that the gum water and mastich are quite boiling, without taking them off the fire add 5 oz. of white wax, broken into small pieces, stirring and beating the different ingredients together till the wax is perfectly melted, and has boiled; then take the composition off the fire, as boiling it longer than necessary would only harden the wax, and prevent its mixing so well afterwards with water; the composition is taken off the fire, and in the glazed earthen vessel, it should be beaten hard, and while hot, but not boiling, mix with it, by degrees, 10 oz. of cold spring water; then strain the composition, as some dirt will boil out of the gum mastich, and put it into bottles.

The composition, if properly made, should be like a cream, and the colors, when mixed with it, as smooth as if with oil. The method of using it, is mixing the colors with it, as with oil; then paint with fair water. The colors may be used by putting a little fair water over them, but it is less trouble to put some water when the colors are observed to be growing dry.

In painting with this composition the colors blend without difficulty, when wet, and even when dry the tints may easily be united by means of a brush and a very small quantity of fair water.

When the painting is finished, put some white wax into a glazed earthen vessel over a slow fire; and when melted, but not boiling, with a hard brush cover the painting with the wax; and, when cold, take a moderately hot iron, such as is used for ironing linen, and draw it lightly over the wax; when the picture is nearly cold rub it with a fine linen cloth to make it entirely smooth; and, when quite cold, rub it again to make it shine.

Painting might be executed in this manner upon wood, or plaster of Paris, without requiring any other preparation than mixing some fine plaster of Paris in powder with cold water to the thickness of a cream; then put it on a looking-glass, and, when dry, take it off, and there will be a very smooth surface for painting upon.

Paintings may also be done in the same manner with only gum water and gum mastich, prepared the same way as the mastich and wax; but instead of putting 7 oz. of mastich, and, when boiling adding

5 oz. of wax, mix 12 oz. of gum mastich with the gum water before it is put on the fire, and when sufficiently boiled and beaten, and is a little cold; stir in 12 oz. of cold spring water, and afterwards strain it.

It would be equally practicable painting with wax alone, dissolved in gum water, in the following manner:

Weigh 12 oz. of cold spring water and 42 oz. of gum arabic, put them into a glazed earthen vessel, and, when the gum is dissolved, add 8 oz. of white wax. Put the earthen vessel with the gum water and wax upon a slow fire and stir them till the wax is dissolved and has boiled a few minutes; then take them off the fire, and throw them into a bason, as, by remaining in the hot earthen vessel the wax might become rather hard; beat the gum water and wax till quite cold. As there is but a small proportion of water, in comparison with the gum and wax, it would be necessary in mixing this composition with the colors, to put also some fair water.

It should be observed that the water used by Miss Greenland in these preparations came from a chalk rock, and was remarkably soft: possibly any other water might answer equally well.

Another Recipe by Miss Greenland *for the Ancient Grecian Method of Painting in Wax.*

Take an ounce of white wax, and the same weight of gum mastich in lachrymæ (tears) that is, as it comes from the tree, which must be reduced to a fine

fine powder. Put the wax in a glazed earthen vessel, over a very slow fire, and when it is quite dissolved strew in the mastich, a little at a time, stirring the wax continually, until the whole quantity is perfectly melted and incorporated; then throw the paste into cold water, and when it is hard take it out of the water, wipe it dry, and beat it in one of Mr. Wedgwood's mortars, observing to pound it at first in a linen cloth to absorb some drops of water that will remain in the paste, and would prevent the possibility of reducing it to a powder, which must be so fine as to pass through a thick gauze. It should be pounded in a cold place, and but a little at a time; as after long beating, the friction will in a degree soften the wax and gum, and, instead of their becoming a powder, they will return to a paste.

Make some strong gum arabic water; and, when you paint, take a little of the powder, some color, and mix them together with the gum water. Light colors require but a small quantity of the powder, but more of it must be put in proportion to the body or darkness of the colors; and to black, there should be almost as much of the powder as color.

Having mixed the colors, and no more than can be used before they grow dry, paint with fair water, as is practised in painting with water colors; a ground on the wood being first painted of some proper color, prepared in the same manner as is described for the picture. Walnut-tree and oak, are the sorts of wood commonly made use of in Italy for this purpose. The painting should be highly finished,

finished, otherwise, when varnished, the tints will not appear united.

When the painting is quite dry, with rather a hard brush, passing it one way, varnish it with white wax, which is put into an earthen vessel, and kept melted over a very slow fire, till the picture is varnished, taking great care the wax does not boil. Afterwards hold the picture before a fire, near enough to melt the wax, but not make it run; and, when the varnish is entirely cold and hard, rub it gently with a linen cloth. Should the varnish blister, warm the picture again very slowly, and the bubbles will subside.

When the picture is dirty it need only be washed with cold water.

Extract from Maty's Review for April, 1785.

" M. Febbroni, who was in England some winters ago, has discovered a new method of encaustic painting, of which he writes me the following account:

" M. Lewis, of Guttenbrunn, the friend of Mengs, and who may be called his successor, has lately executed a picture according to my manner. It is a Thalia done upon wood, prepared with wax; and is remarkable for the vivacity and splendour of the coloring. I believe I have already mentioned to you, in what this new method consists. You melt, or rather dissolve some good white wax in naphtha petrolei without color, till such time as the mixture has acquired, by cooling, the appearance and consistence

sistence of an oil beginning to freeze by the cold. You mix your colors with this, and then keep them in small tin boxes. You dilute them more or less with the same naphtha, according as they dry, or as you wish to use them. This painting allows time enough to give all the finish you desire, and if you wish to work in a hurry, you may dry it as fast as you please, by exposing it to heat. When the picture is finished, it is of that fine tone, which is preferable to every varnish, or if you choose a varnish, you need only warm the picture, and all the naphtha will evaporate. When this is done, you must wait till the picture cools, when you must polish it, by running it over neatly with a cloth, as the ancients used to do. If you wish to have it still brighter, you must melt white wax on the fire, without suffering it to boil; mix a little naphtha with this, and draw a layer of it over the picture already heated, by means of a brazier, which you hold under, if the picture is small, or before it, if it is large. The colors at first appear spoiled, but you restore them to their first beauty, if, when the layer of wax is cooled, you polish it by rubbing with a cloth. It is then that the colors take the high tone of oil. If you fear the effects of fire for your picture, you are to make a soap of wax, which is to be done by boiling white wax in water, in which you have dissolved a twentieth part of the weight of the wax of marine alkali, or *sel de souda* very pure. Rub your picture with this soap, and when it is dry, polish it as above. If you do not choose either of these methods, give your painting its usual varnish of sandarac and spirit

of

of turpentine. This method has been found preferable to all those that have been tried, and superior to oil for the beauty of the colours. There are many fine colours which cannot be used in oil, which may be made use of with great success in this method.

" As the naphtha entirely evaporates, one may be assured that this is the true method of painting in wax. There is likewise much to hope for the duration of pictures painted in this manner, as wax is much less liable to alteration than oil, and does not so easily part with its phlogiston."

This extract seems to suggest a more probable plan of attaining the ancient secret, than that of Count Caylus, or Mr. Muntz ; whose rule was, to saturate a cloth, &c. with wax, then to paint on it with water-colours, or crayons, and fix the colours by gradually advancing the picture to the fire, till the wax, being melted, had absorbed them ; then equally gradually withdrawing the piece. The thought was ingenious, but should seem to be more troublesome than that of Mr. Lewis, as above.

After all, it may justly be doubted, whether some bitumen, of a still more exalted and spirituous nature, was not the vehicle which compounded those colours whose brilliancy has remained from the remotest ages. That the ancients were well acquainted with bitumenical productions we are well assured, and possibly the East may possess some spring or springs of superior or more preservative qualities. Might not the ingredients they used in embalming afford a hint ?

Naphtha petrolei is a bituminous kind of oil, issuing

issuing out of certain rocks in the territory of Modena. There are three sorts, more or less pure and colourless. It is used medicinally, and considered as good for sprains, bruises, &c. (This at least is the sort sometimes imported into England). It is very spirituous and volatile.

OF ETCHING.

This is one branch of the art of Engraving, and possesses some qualities in which it is superior to others; being executed with the utmost ease and freedom, and when well managed, expressing many subjects with great truth, and character.

The first preparation for etching, is to lay a ground (vide GROUND) over the plate, which operation is thus performed.

At the most convenient part of the plate, as well for holding it, as for the work which is to be executed on it, is tightly fixed a hand-vice; then, the plate is heated, till the copper shews a small change of color; or, till the back part of the plate, being spit upon, rejects the spittle. The ball of ground, which is tied in a thin covering of silk, is now passed gently over the plate so as to distribute the ground evenly to all parts, the heat of the plate melting it through the silk: then with the dabber, which is nothing more than a small quantity of cotton tied in silk, the ground is beat, or dabbed, to a perfect thinness and evenness; (in this part of the business much address is required, since, if the ground, when finished, is thicker in some places than in others, it will deceive

the point employed upon it) the ground is then smoked, till thoroughly black, for the clearer discerning the strokes of the etching.

A wax taper, twisted together four, or five, or more times, is the most convenient candle to smoke with; but any will serve for this purpose.

The plate must be perfectly clean, and free from grease; as greasy spots, &c. prevent the ground from holding in those parts. To clean the plate, scrape a little whiting on it, and wipe it off with a clean rag, which will carry the grease with it.

While the plate is cooling, after the ground is laid, scrape some red chalk on the back of your print, tracing, or drawing, and rub it in all over with a clean rag. Then place the reded side on the plate, making it fast at each corner with soft wax. Lay the etching-board under your hand, to prevent bruising the ground; and, with a blunt etching-needle, trace lightly the outlines, and the breadths of the shadows, till the marks of them appear on the ground, which you must take care not to penetrate by tracing too heavily.

It will be proper at intervals to lift up a corner of the tracing, and to examine whether every part be perfectly traced before you take it off; as it will be extremely difficult to lay the paper down again exactly in its former position, if once removed.

Having completed the tracing, the off-track, or drawing traced, is removed; and the subject is ready for etching.

The practice of etching is easily attained by proficients in design; since it is little more than drawing, in

in strokes, with a point, on the plate, what is otherwise drawn with a pen, pencil, &c. on paper.

The etching-board (by some termed a bridge) is a thin piece of board, generally of mahogany, of a proper length and width, raised by small supports at each end, to a convenient height for the hand to rest on it.

The points, or needles, are almost similar to sewing needles, but are stronger, and are inserted into handles four, or five, inches long, for the convenience of being properly held.

The best way to begin a subject, is, by forming the outlines very carefully, then inserting the shadows, beginning first in the darkest places.

Lines drawn in etching may be crossed by others, if wanted.

Two lines drawn by the side of each other closely, will unite into one under the operation of biting, whereby this line will become of great breadth, and color: this mode is very useful for dark fore-grounds in landscape, and has a good effect in architecture, &c. but the use of etching in historical subjects, is chiefly to prepare the figures, to be afterwards treated by the graver.

The characteristics of etching, are, a certain roughness (compared with performances of the graver) which does not suit glossy, and shining, objects, but which applies with good effect to coarser parts; such as, in landscape, the barks of trees, the broken, and looser touches of fore-grounds, &c. In architecture, it represents very happily the ravages of time in old buildings, mouldering walls, &c. Another charac-

teristic of etching is, its freedom; for which reason, it suits well the leaves of trees, light clouds, &c.; and, beside these properties, it is of great service where a true, even, and uniform color is wanted, as it is not only much quicker, but also more certain than simple graving, in general: hence it suits the blue parts of skies, the even teints of (new) architecture, back-grounds to portraits, &c. which are conducted by a parallel-ruler.

It is evident from the services required, that the points to be used, must vary in their fineness, some lines being made broad, others very thin. To whet a point with perfect truth, free from angular projections, &c. requires time, patience, and practice.

The plate being etched, the next process is to excavate the lines drawn, by subjecting them to the action of aqua-fortis; which operation is termed *biting*.

DIRECTIONS FOR BITING.

First, examine your work carefully, to see that nothing be omitted, or any thing redundant; if any scratches appear on the ground, or any mistakes be committed in the etching, they are to be stopped out; which is done, by covering them with a mixture of lamp-black and varnish, laid on with a pencil, which, when dry, will resist the aqua-fortis. But it is sometimes best to stop out these, as they occur in the course of the work, for by this means they will be less liable to escape notice among the multiplicity of

of other lines and parts; and when the varnish is dry, you may etch over it, if necessary.

The next thing is, to surround the work with a rim, or border, of soft wax, about half an inch high, forming the wax into a spout, at one corner, by which to pour off the aqua-fortis: and that it may not run out at any other part, take care to press the wax close and firm to the plate.

Having poured the mixture of aqua-fortis on the plate, let it continue a short time corroding the lines drawn; wipe off the bubbles, as they rise, with a feather, which may remain on the plate during the biting; after a proper time, pour off the aqua-fortis, and wash the plate, carefully, with fair water, pouring it on and off; then let the plate dry, and, by scraping off part of the ground from the faintest part of the work, try if it be sufficiently bitten; if not, stop out the part you have tried with lamp-back and varnish; and when that is dry, pour on the aqua-fortis again, for a further operation.

When the faint parts of your work are bitten enough, stop them out with the varnish, &c. and proceed to bite the stronger parts, stopping them out, as occasion requires, till the whole work is sufficiently bitten: then, warm the plate, and take off the soft wax; after which, heat the plate till the ground is melted, pour on it a little oil, and wipe the whole off with a linen rag. When the ground is taken off, rub the work well with the oil-rubber, and wipe the plate clean; then proceed to finish with the graver what parts of the subject require that process.

The wax for the border, is made, by mixing with

a pound

a pound of bees-wax, one quarter, or one third, of a pound of Burgundy pitch, to soften it. As for any color added to it, it is useless; because, after a little while, the wax becomes black.

It is to be observed, that in biting a plate, much attention is required. If a plate be under-bitten, *i. e.* if the parts have not attained their proper color and force, there is usually no remedy, but by following every line with the graver, in order to blacken it: as on the other hand, if very much over-bitten, a plate cannot be rendered neat and delicate, let never so much time and skill be wasted on it. If bitten but little above the color wanted, a few strokes of the burnisher will lower it at pleasure.

If the air rising from the copper and forming bubbles *hisses* very much, in biting, it may be suspected that the aqua-fortis is too strong, or acts too suddenly on the copper, which for tender work is injurious.

OF ENGRAVING STROKES.

The tools necessary for Engraving are, an oil-rubber, burnisher, scraper, and oil-stone, also needles, or points; also gravers, compasses, a sand-bag, parallel ruler, &c.

Gravers are of different shapes; square, and lozenge: several of each should be provided. The square is used in cutting the broad strokes; the lozenge for the fainter and more delicate parts. Gravers should be in length five inches and a half, or thereabouts, the handle included.

The

The sand-bag is used to lay the plate on, for the conveniency of turning it about to follow winding lines. The oil-stone must be of the Turkey sort; and, while in use, must never be kept without oil.

Great care is required to whet a graver nicely, particularly the belly: lay the two lower angles of the graver flat upon the stone, and rub them steadily till they are polished like a mirror; and till the belly rises gradually; so that, when you lay the graver's edge on the plate, you may just perceive the light under the point; otherwise, it will dig into the copper, and it will be impossible to execute work with freedom. When the belly is whetted: to whet the face, place the flat part of the handle in the hollow of your hand, with the belly of the graver upwards, on a moderate slope, and rub the face on the stone, till it has an exceeding sharp point, which you may try upon your thumb-nail.

For tempering the graver, if too hard, vide GRAVER.

Cut off that part of the handle which is on a line with the belly of the graver, to make that side flat.

Hold the handle in the hollow of the hand, and extend the fore-finger toward the point, resting it on the back of the graver, that you may guide the tool with more ease.

Take care that your fingers do not interpose between the plate and the graver, but let the whole machine slide, as it were, along the plate; and trust to the resistance of the copper for its steadiness. Delicacy of feeling is a prime quality in a good engraver.

Let

Let the table or board you work at, be firm and steady.

For strait strokes, let the plate lie flat on the table.

For circular or crooked strokes, place the plate on the sand-bag, and hold the graver firm, moving your hand, or the plate, or both, as you see, or rather feel convenient.

Learn to carry your hand with such dexterity, that you may end your stroke as finely as you began it; and, if you have occasion to make one part deeper, or blacker, than another, do it by re-entering that stroke.

In the course of the work, scrape off the barb, or roughness, which arises, with the scraper; but be careful, in doing this, not to scratch the plate. Never scrape directly across a line, but always at an easy angle along the course of the stroke.

Mistakes, or scratches in the plate, may be rubbed out with the burnisher, if of no great depth, and the part afterwards cleared with the scraper; polish it again at last lightly with the burnisher.

When you wish to examine what work you have done, rub it with the oil-rubber, which, by filling the strokes with black, will shew them, when the plate is wiped, to advantage. Too much oil-rubbing injures the finer work; as does (very materially) too much scraping.

Engraving in strokes, or hatches, as it is the most ancient, so it is the most noble, manner of engraving: it requires most skill, affords most scope for judgment, and genius, as well as for manual dexterity; but

but is, accordingly, more difficult to execute in a masterly, and superior, manner.

It is evident, that any line drawn, may be crossed by another line; or any number of lines, by a second number of lines; but it is equally evident, that not every such crossing can be graceful. If it follows too nearly the course of the original lines, it will form, by its intersections, a number of areas, of too sharp, and disagreeable lozenge, shapes; if the first lines are crossed at right angles, the areas formed will be so many squares, which, by possessing a kind of hardness in their appearance, apply only to certain subjects. The medium admits an infinity of degrees.

If we examine any (large) well-executed print, we observe, in some places; (1) single lines, or strokes, of considerable length, according to the drawing; (2) lines crossed at an agreeable lozenge; (3) lines crossed at right angles, where a kind of obscurity is wanted; (4) two lozenge lines, crossed with a third, usually much softer, and more tender than the two former, but following, or rather *attending* their course; (5) lines at right angles, crossed by a third at a lozenge, to divest the squares of their hardness and stiffness; (6) lines at a considerable distance from each other, and of a firm color, with a thin line between them; this is called interlining; (7) the same, sometimes crossed in the same manner; (8) round dots, in the flesh; (9) long dots, for the same purpose; (10) long dots, crossing each other; (11) thin lines crossing lines of dots; (12) very thin lines, made by the dry point, in the lights, &c. and many other contrivances for producing variety. These,

applied according to the indications of the design, or to the taste, and skill, of the artist, impart to capital prints a richness and character, which no other manner of engraving can boast of; and which is yet farther augmented, by a judicious introduction, and mixture, of etching, engraving, and dry point lines.

The dry point is so termed, because used without a ground, consequently not bitten; the burr, or barb, rising from the copper, by the use of it, is very strong, and must be scraped off carefully. The whole point, and its handle, is stronger than an etching point, to sustain greater pressure when in use.

It appears from this mode of reasoning, that to attain considerable excellence in this style of engraving, is no easy matter; and indeed, of the many who are brought up to it, few arrive at superior honours; or, if they obtain skill in one branch (etching for instance), they fail in others: yet, as much of the progress, even of the best of plates, is little more than mechanism, and patience, abilities of all degrees are useful in the course of a long work.

It is proper to caution those inclined to attempt any of the branches of engraving, against a cramp posture, or, leaning the stomach against the table, or, poring with their eyes too close to the plate, &c. while at work. In very delicately finished works, the artist always has recourse to a magnifying glass; but as our readers certainly will not undertake such works, we proceed to another species of Engraving.

OF ENGRAVING IN CHALKS.

This manner of engraving has lately highly excited the public attention, and, indeed, has deserved it, by the beauty of many specimens which it has produced.

The process for preparing the plate, *i. e.* laying the ground, tracing, &c. is the same as before. The principles adopted in the etching, differ only, in that, instead of *lines*, the drawing, shadows, &c. are inserted in *dots*, as freely as may be, yet carefully. The biting is the same; with this difference, that whereas, in biting lines, no two should be suffered to unite, unless previously intended, and prepared for that purpose; in biting chalks (provided they do not by their union form a hard spot, or too considerable a black) this accident is not of equal consequence, if the subject be large. In small subjects, the more delicate and important parts should not be colored in the etching, but wholly inserted with the graver; being less hazardous, and much more accurate.

The plate bitten, and the ground removed, the effect of the subject represented, remains to be worked up with the graver. For small subjects, or such as are to be neatly finished, this is the only tool to be depended on. The best manner of preparing the graver for firm work, is, by changing its situation in the handle, so that the belly part of it, which was lowermost, becomes uppermost; then, by turning the handle in the hand, the point acts on the

copper from a greater elevation, which for strong dots is preferable; as only dots, not strokes, are required, the tool is, in this position, manageable with much greater facility, and speed.

The remaining part of the progress of a plate consists only in covering the copper with dots, in a manner lighter, or heavier, proportionate to the color, and to the drawing, required. When one covering of dots is scraped off, another must be inserted, and so on; by this repetition, a proper grain of dots, and the general masses of shade are procured. This process is tedious; but in return, it requires no great skill in the operator; a little practice, and proper attention, attains the whole mystery.

In larger subjects, or those which are to be slighted, some persons use tools of various sorts, such as wheels, with single, or double, rows of teeth, or, cradles resembling a mezzotinto grounding tool (but made with teeth), or, others constructed to their minds; but, these tools, though more expeditious than the graver only, are seldom so accurate, or so pleasing in the effect they produce.

These kind of tools, and a variety of others (amounting in the whole, when a set is perfect, to near forty), have been very much used in France, where the manner of engraving in chalks was first practised; they very frequently produce an effect more closely resembling an original drawing in chalks, than English performances finished solely with the graver; but, on the other hand, the neatness and accuracy, as well as a certain mellowness of style which distinguish English productions, are not only

only vastly superior to those of the French artists, but are universally esteemed so, throughout Europe.

The chief merit of plates engraved in chalks, is inserted by the artist who finishes the subject. Care and attention is requisite, and a good habit of design indispensable; every requisite in the manual practice is easily acquired.

The French have very well imitated drawings on blue paper, by using two plates; one of which printed the black-chalk effect, the other the white-chalk: on the same idea, chalk plates printed in black, on blue paper, may afterwards be touched with white-chalk, to a very pleasing effect.

OF RE-BITING.

When the parts of a subject which were intended to be dark, have failed of their proposed effect, they may be re-bitten, by the following process (which applies to all kinds of etching, and is among the *secrets* of the superior engravers): at a convenient part of the plate, being properly heated for the purpose, melt a quantity of ground; then with a dabber, carefully, by degrees, transplace as much of the ground thus melted, as is necessary, to the part proposed, by beating it gently, so that the surface, only, of the copper may be covered, and the hollows, or excavated lines of the work may remain free and clean. When this ground is cold, it may be re-bitten with aqua-fortis as before. It is frequently better not to smoke it, lest the heat of the taper should

should melt the ground into the work; in which case, wherever the ground covered the plate the aqua-fortis could not act.

N. B. Re-biting is sometimes used both to strokes and dotes, to strengthen a part which has not acquired all the color it should have; even after it has been laid in with the graver.

To clean strokes, &c. engraved, use a little spirits of turpentine, and rub the plate with crumbs of bread; if the dirt is of long standing, soap lees poured on the plate, while warming, is very effectual: but as this is a corrosive liquor, it must be immediately washed off the plate by plenty of cold water; and it is too stong for mezzotinto plates (especially) unless it be very carefully used.

OF MEZZOTINTO.

Mezzotinto is said to have been first invented by Prince RUPERT, about the year 1649, who took the hint from seeing a soldier file his rusty musket; and Mr. EVELYN, in his History of Chalcography, gives us a head, performed by that Prince, in this way; but Mr. LE BLOND is said to have introduced it most successfully into practice.

The Prince laid his grounds on the plate with a channelled ruler; but one SHERWIN, about the same time, laid his grounds with a half-round file, which was pressed down with a heavy piece of lead. Both these grounding tools have been laid aside, for many years; and a hand-tool, called a cradle, resembling a shoe-

a shoemaker's cutting-board knife, with a fine crenelling on the edge, was introduced by one EDIAL, a smith by trade, who afterwards became a *mezzotinto* printer.

As it is much easier to scrape off, or to burnish away, the parts of a dark ground corresponding with the outlines of any design sketched upon it, than to form shades upon a light ground, by an infinite number of hatches, strokes, and points, which must all terminate with exactness on the outline, as well as differ in their force, and manner, the method of *scraping*, as it is called, in *mezzotinto*, becomes, consequently, much more easy and expeditious, than any other manner of ENGRAVING. The instruments used in this kind of engraving are CRADLES, SCRAPERS, and BURNISHERS. The scrapers for delicate work are much like a surgeon's lancet in shape and in fineness, but others are much stronger, for greater speed, and riddance.

To lay a ground, the cradle is to be passed forwards uniformly in the same direction; being kept as steady as possible, and pressed upon with a moderate force, till the instrument has passed over the whole surface of the plate. This first course of grounding must be crossed, at right angles, on the same principle. New lines must then be drawn diagonally, and the cradle passed along them as before; when the first diagonal operation is performed, these lines must then be crossed at right angles. The plate having undergone the action of the cradle, according to this disposition, a second course of cradling must be commenced: and the same must be repeated,

peated, regularly, changing the direction of the lines made by the tool. When the whole of this operation is finished, it is called *one turn*; but, in order to produce a very dark, and uniform, ground, the plate must undergo the repetition of all these operations many times.

When the plate is prepared with a ground, the sketch must be traced on it, by means of the paper rubbed on the back-side with chalk, as mentioned before. It is also proper to over-trace the lines, and drawing, afterwards with black lead, or rather, which is much better, with Indian ink, to secure the outlines. The scraping is performed, by paring, or cutting away, the grain of the ground, in various degrees; so that none preserves its original state, except the touches of strong shadow. The general manner of proceeding is like drawing with white upon black paper. The masses of light are first begun; and those parts, which lighten upwards but are in shade below: the reflections are then touched; after which the plate is blackened with a printer's blacking-ball, made of felt, in order to view the effect: the whole is then gradually brought to effect by scraping over the parts till they are sufficiently lightened.

Observe always to begin with the strongest lights.

It is easy to scrape more off any part if it be too dark; but, if a part be too much scraped away, it is troublesome; for it must undergo the action of a small cradling tool, proportioned to the size of the part, and the additional ground thus procured is not always a correct *match* to the original ground, which has

has an unpleasant effect, unless very skilfully managed. Mezzotinto plates are therefore *proved*, long before they approach toward finishing, if the subject be in any degree intricate, or considerable.

OF AQUA TINTA.

This manner of producing on copper the effect of a drawing washed in Bistre, or Indian ink, is altogether a modern invention; it was attempted in 1755 or 1760, by Mr. P. SANDBY and Mr. DALTON, but it then failed of that success it has since met with. The first person whose productions were not only imitations of drawings, but were capable of printing any considerable number of copies, was Mons. LE PRINCE of Paris; whose early performances appeared in his "Modes & Usages de Russie." Mons. LE PRINCE, by degrees, improved his discovery, till at length it was thought, by the Honourable Mr. Greville, (brother to the Earl of Warwick) a secret worth purchasing at the expence of thirty guineas. This gentleman communicated the process to Mr. P. SANDBY, whose attention and genius carried it to great excellence. Since its importation into England, it has been the subject of repeated and continued investigation; and as it was impossible to prevent the inquisitive essays of many ingenious engravers, who thought this article worth their acquisition, so it has happened, that more ways than one of producing this effect have been discovered. Each person thinks his own method the best; and all

studiously conceal their principles; we may therefore claim the merit of being the first, in England at least, who communicated the secret to the public. We shall report several modes of procedure.

THE FIRST WAY we shall mention of producing on copper the effect of tinted drawings, is, by grinding a quantity of sulphur in oil, and with this mixture painting the plate; then, by placing the plate over a gentle fire, the vitriolic acid contained in the sulphur is set at liberty, and acts as a corrosive on the copper, forming a color lighter or deeper, in proportion to the heat of the fire, the time of its exposure to it, and to the strength of the acid employed in the mixture.

A SECOND WAY of producing the same effect, is conceived on the well-known different affections of the same menstruum to different metals; and proceeds thus; saturate a quantity of aqua-fortis of a due strength, with shreds of silver; this liquor poured on copper, will quit the silver it contains, in order to act on the copper, by which it is more attracted; the silver will precipitate in the form of a subtle powder, and thereby occasion irregularities on the surface of the plate, which will hold the ink when printed.

Of these manners of procedure, the first is very offensive in its process, the fumes of the composition being highly disagreeable. The second, is chiefly applicable to very slender parts, and to add a color to places which are not of importance sufficient to require a fresh ground, or much trouble; such as leaves of trees, light flying clouds, &c. as it does not

possess much force, without great good fortune, or very close attention.

A THIRD WAY proceeds on the principles, that minute interstices, alternately black and white, will, when viewed at a little distance, produce the effect of all black, according to the tone to which they are adapted: therefore, whatever will so fix itself to the plate, as to prevent the action of aqua-fortis where it is in contact, and yet will permit the aqua-fortis to corrode all around it, will produce alternately blacks and whites. This was first attempted with rosin finely pulverized; but that was apt (if too fine, or too much warmed) to form a coat, or superficies, over considerable parts of the copper, thereby resisting the menstruum on all sides. Sal ammoniac, pulverized with the rosin, and intimately mixed with it, was found to preserve interstices; but this applies only occasionally.

There are several gums which possess nearly similar properties; but the following appears superior to all others, and is (excepting the change of gum juniper, for gum copal) the method followed by Mons. LE PRINCE.

Grind a sufficient quantity of gum copal; divide it by sifting, into three or four parcels at pleasure, according to the fineness of each parcel: the first or finest powder serving for the lighter parts of the subject to be treated, such as distances, sky, &c. The second or grained powder for middle tints; the coarser grains of powder for fore-grounds, and other very dark places; where strong biting is required by the subject. To accomplish this separation, the sieves

must vary in fineness. Sift on the plate a sufficient quantity of the finer powder; the plate will now appear of an uniform tender white, unless closely examined, when the interstices between the particles of gum will be very discernible; heat the plate very gently, only till the gum changes from its white color, and is so far melted as to fix on the plate, from which it is scarcely to be distinguished by its color. When cold, the plate is ready for receiving the aqua-fortis. Stop out the lights, &c. as in common biting.

When the biting is over (which does not last long, a minute, perhaps, to the fine powder), wash the plate with water, as before directed for biting, and examine the effect produced, and the state of the ground; if some parts only are done, stop them out, and proceed to bite the other parts; if the whole be done of which this ground is capable, clean the plate by heating it, and apply a little oil, to remove the gum easily, if necessary. Those parts which are of the just color required, must then be secured, by stopping them out; the second powder must next be treated as the first has been, and the coarser powders, or rather grains of gum, must be treated in the same manner, to procure the bolder strengths: but these may endure proportionately stronger biting.

It is necessary to have more powders than one, because the hold the powder, or grains, has of the copper will permit only a certain degree of action in the aqua-fortis. The grosser the grains, the stronger hold they take of the copper; they will bear more heat to fix them, and will suffer more copper to be cor-

corroded away from around them: but then, they would make very staring whites, were not a ground previously laid by the others; or, if they were misplaced on a subject, they would greatly disfigure it.

Sometimes a finer tint may be laid over a coarser to good advantage.

Sometimes a larger grain of whites may be procured, by melting the finer powders more than usual, which, by spreading each particle of gum, makes each grain cover a greater surface, which it protects from the action of the aqua-fortis.

It requires some patience, and facility with the pencil, to prepare the plate by stopping out; which operation is not only to be attended to at first, to preserve the whites, but may be repeated at any time, provided the grains of powder attached to the plate appear able to sustain the biting necessary to produce the color proposed.

Every manner of engraving by aqua tinta has much of uncertainty connected with it; and requires, not only good judgment, but great attention, and some, perhaps a good deal, of good luck, to succeed happily. If, therefore, any mode of practising it could be reduced to a certainty of producing the effect required, and could be so conducted as to be under command, it would be a fortunate discovery.

The first difficulty in *aqua tinta* is, to get the ground perfectly even, and uniform: to accomplish this, we have two objects in view; the *first* is to compose a ground which shall be properly divided into (1) a material which may produce grains to resist the aqua-fortis: (2) a material which will

will produce interstices to admit the aqua-fortis. The best way, at present known, is, to bruise, grind, break, and sift together, repeatedly, till the compound powder appear of one uniform color, the gum copal, with a proportionate quantity of asphaltum; which will make a powder of pretty nearly equal fineness. Now, the gum copal will be fixed on the plate, by being melted, by means of so gentle a degree of heat as will not affect the asphaltum: this powder, then, being loose, admits the aqua-fortis to surround the grains of gum. N. B. Other powders may be discovered to answer the same purpose: and, indeed, whatever is near the specific gravity of the gum, may succeed in practice.

The second object we have in view is, to lay the grounds perfectly uniform, and evenly distributed, over the surface of the copper. It is true, that a steady hand may sift a powder through a fine sieve, very evenly, if the eye follow it closely, and this method is not to be despised; but, almost every body must have observed, that, powders of all kinds are precipitated when at rest in water, very evenly, and uniformly; if then, a quantity of water, having a proper proportion of powder diffused in it, be poured on a plate, the water may be drained from it, by a proper inclination of it, while the powder remains behind: when the water has entirely quitted the plate, the ground, thus obtained, may be *set* by being warmed as before.

A menstruum, in which the grains of gum are dissolved and intimately mixed, may be yet better. Gum or rosin dissolved in spirits of wine, the liquor being

being poured on the plate, the spirits will evaporate, and the rosin becoming dry, will form itself into grains, which being fixed on the plate, allow interstices for the action of the aqua-fortis.

As the time necessary for putting a border of wax round a plate, is more than is engaged in the biting of a light ground, some artists make use of a trough, properly painted, and secured from the action of the aqua-fortis, into which, when filled with aqua-fortis, (and after having stopped out all that is to be left white on the plate, not forgetting the margin), they plunge the plate; and suffer it to remain there, only so long as they judge necessary to produce the color wanted; if upon examination the plate be not bitten enough, they plunge it again, till they are satisfied. This they do to every ground, till the plate is finished.

Each of these modes of practising aqua tinta, supposes a good deal of trouble in stopping out the parts which are to be left white: there have been, therefore, other methods suggested, which for some subjects answer better.

First, lay a ground of gum copal grain, all over the surface of the copper: when this is cool, and ready for use, paint, with the shadowing composition mentioned below, in the same manner, and with the same freedom, as with Indian ink, the shadows of the subject (if it be a landscape, the foliage of the trees, &c.) let it be thoroughly dry; then, with a large, soft, camel's hair pencil, cover over the whole, with the asphaltum varnish: and when that is thoroughly dry, plunge the plate into water: in a short space

space of time, the water penetrating through this varnish, will dissolve the sugar, or the treacle, which forms its composition; and that, rising, will part from the copper, and bring with it all that covers it, leaving the copal ground unaffected by the water, and still adhering firmly to the plate. This bite as before.

The ASPHALTUM VARNISH is made, by dissolving four ounces of asphaltum in about eight ounces of spirits of turpentine; using a very gentle heat: pour off the liquid, and add more of either ingredient, as the varnish may be thought too thick, or too thin.

The SHADOWING COMPOSITION is made, by taking any quantity of treacle, and grinding it into a paste with whitening; or, by taking, of coarse sugar about two ounces, of whitening about one ounce, and grinding them with a sufficient quantity of water, to form a paste proper for use by the pencil.

If any hard edges occur in aqua tinta, they may be softened by the burnisher, or the burnisher may insert lights or slight touches of drawing, &c. occasionally, to advantage.

The aqua-fortis used in this method of engraving should not be too strong; because, as its operation is always rapid, if too strong, it will break up the ground, and do other mischief, before it can be prevented. It is not a bad way to try the strength of it, before it be used, on a separate piece of copper.

A very great disadvantage attending re-tinting of any part is, the nicety required to match a color; in fact, it is hardly possibly to lay two grounds so precisely alike as is requisite for that purpose: nay, it fre-

frequently happens that a second ground obliterates, or at least damages, the first over which it is laid.

Aqua tinta is a method of engraving (if it may deserve that title) so very rapid, that it will produce on a large plate, in one week, the effect of a month's labour at some other kinds of engraving: it is in general, however, but shallow on the copper, yet, when well managed, is sufficiently lasting. Its merit consists much in a very even colour, smooth, and free from blemishes. It applies well to architecture, to landscape, and to back-grounds.

Though I do not think much use can ever be made of the invention, yet I think proper to insert here the mode of etching upon glass: or, rather, the discovery of a solvent which acts upon glass, as aqua-fortis does upon copper.

The acid for this purpose is procured from sparry fluor, or Derbyshire blue John, powdered, and by means of concentrated vitriolic acid submitted to distillation by a gentle heat; what comes over, and unites with a proper quantity of water in the receiver (which is of lead as well as the retort) is the acid: it must also be kept in a leaden vessel. This will corrode lines, &c. drawn upon glass through a varnish.

Explanation of the Method of printing in COLOURS.

The plate being warmed in the usual manner, the colours are applied by means of stump camel-hair pencils, to the different parts, as the subject suggests; it is then wiped with a coarse gauze canvas,

any other being improper; after this, it is wipde clean with the hand, as in common practice; and being again warmed, is passed through the press.

The colors are mixed with burnt linseed oil, and those generally used by painters are proper.

The little finger generally supplies the place of pencils. This art succeeds best in chalk engravings. The prints, if touched up with colours, after they are printed, will approach very beautifully toward the effect of pictures.

OF CUTTING IN WOOD,

This business is, properly, neither sculpture, nor engraving, but, being applied to many of the purposes of engraving, it claims affinity to that art. The smoothest grained woods are the best; such as pear-tree, or beech, but above all box. The surface being prepared by smoothening, a thin coat of white lead, tempered with water, is passed over it, the outlines of the design are traced with a black lead pencil, or ink, and the design is laid on the block; then wetted, and carefully rubbed on the back, till the lines traced are transferred to the white lead, which shews them plainly; the blank parts are then cut away with sharp knives, small chissels, or gravers, as required. This kind of work differs from engraving on copper; in that, the parts of the copper which are *cut out* hold the ink, and form the impression; in this, the parts which remain, being *promi-*

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nent, perform the same business. The blocks are printed as letter-press.

This kind of work has been made to produce an effect resembling washed drawings, by using several blocks, correspondent to the several colors of the design: the ink, being accurately mixed to the color wanted, is applied all over the surface of the block, and the darker colors printed after the lighter. Aqua tinta has superseded the use of this method; but one similar to it is practised at Paris, only using copper plates instead of wooden blocks, and printing the separate parts of the design in their proper colors, by which they are very prettily tinted.

In delicate works, or parts expressive of distances, to slope away the surface of the wood gently in those parts produces a good effect; because, in the printing, they less hold the ink, and less ink is pulled off them by the paper; consequently, they appear fainter.

OF MODELLING.

This is one branch of the art of the sculptor, and, in many cases, a very important one; being, to all works of considerable size, an indispensable requisite previous to cutting the marble; being also, the usual mode in which young sculptors study the principles of their profession, academy figures, &c.

The tools for this purpose are usually slender sticks of wood, made by the artist himself, and therefore of a shape at his pleasure; but, whatever other implements may occasionally be employed, the thumb and fingers generally perform the major part. The clay to be used should be fine, soft, free from stones, dirt, &c. and be carefully examined before it is used. In London, this kind of clay is procured from about Vauxhall.

To model a Bas Relief: on a strong board, of sufficient size, sketch the dimensions of the subject intended, then place the clay, which is moist and adhesive, laying a greater quantity on the parts which are to be raised, to give them thickness, and following the course of the drawing proper to the subject.

To model a figure, it is sometimes requisite to insert little sticks into the limbs, and other parts which will not support themselves without props; but this requires care. It is a liberty very allowable in modelling, to support the figure with beds of clay in convenient places, where they do not injure the composition, since these kind of models are to be considered as little more than sketches, or preparatory studies.

When

When the model is quitted, if not finished it must be kept cool, and moist, by being covered with a wet cloth.

If a model is intended to be preserved, it must be set by, to dry very thoroughly; then, taken to a pottery, where it must be gradually hardened, and baked. There are many risks attending this process; if the clay be not dry within, however it may appear without, sudden heat will spoil it; or, if there remain any stone concealed in it, when the heat of the fire reaches that stone, it will explode, and crack the piece.

If the colour of the clay used is not approved of, it may be painted in Distemper, after being burnt; oil colors, having a glossiness, are seldom employed.

To prepare for a large piece of sculpture.—The model is finished as above, the size of the figure intended, and then molded in separate parts, in which, when re-united, is cast a plaster-figure; which is *repaired*, (*i. e.* cut, scraped, &c.) with great accuracy. This figure is now the standard, from which a copy in marble is to be taken, the original part of the business being over.

To MODEL IN WAX.—The process is much the same as with clay. To temper the wax, some add to a pound of wax half a pound of colophony; some add turpentine, melting the whole with olive oil; some insert a little vermilion, or other color, to give it a tint. Wax will readily take every color added to it; and is accordingly sometimes used to imitate life; in which procedure cleanness of tint must be carefully attended to.

OF SCULPTURE.

Mr. BACON having communicated to the public, in the Cyclopedia, some remarks on that profession in which he excels, to offer it to our readers, requires, we presume, no apology. They are as follows:

" It is probable that *sculpture* is more ancient than painting; and, if we examine the style of ancient painting, there is reason to conclude, that *sculpture* stood first in the public esteem: as the ancient painters have evidently imitated the statuaries, even to their disadvantage: since their works have not that freedom of style, more especially with respect to their composition and drapery, which the pencil might easily acquire to a greater degree than that of the chissel; but, as this is universally the case, it cannot be attributed to any thing else besides the higher estimation of the works on which they formed themselves. Which is the most difficult art has been a question often agitated. Painting has the greatest number of requisites, but, at the same time, her expedients are the most numerous; and, therefore, we may venture to affirm, that, whenever a *sculpture* pleases equally with a painting, the sculptor is certainly the greatest artist. *Sculpture* has indeed the honour of giving law to all the schools of design, both ancient and modern, with respect to purity of form. The reason, perhaps, is, that being divested of those meretricious ornaments by which painting is enabled to seduce its admirers, it is happily forced to

seek

seek for its effect in the higher excellencies of the art: hence elevation in the idea, as well as purity and grandeur in the forms, are found in greater perfection in *sculpture* than in painting. Besides, whatever may be the original principles which direct our feelings in the approbation of intrinsic beauty, they are, without doubt, very much under the influence of association. Custom and habit will necessarily give a false bias to our judgment; it is therefore natural, and in some measure reasonable, that those arts which are temporaneous, should adapt themselves to the changes of fashion, &c. But *sculpture*, by its durability, and consequent application to works of perpetuity, is obliged to acquire and maintain the essential principles of beauty and grandeur, that its effect on the mind may be preserved through the various changes of mental taste. It is conceived, that it will scarcely admit of a question, whether the ancients or moderns have most excelled in this art; the palm having been universally adjudged to the former. To determine in what proportion they are superior is too difficult an attempt. Wherever there is a real superiority in any art or science, it will in time be discovered; but the world, ever fond of excess, never stops at the point of true judgment, but dresses out its favourite object with the ornaments of fancy, so that every blemish becomes a beauty. This it has done by ancient sculpture to such a degree as not to form its judgment of *that* by any rules, but to form an opinion of *rules* by the example. As long as this is the case, modern art can never have a fair comparison with the ancient. This partiality to

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the ancients is so strong as to prevent almost all discrimination; and is the sole reason, why many antiques, that now stand as patterns of beauty in the judgment of most connoisseurs, are not discovered to be copies. This is not more important than it is easy to be perceived by a judicious eye; for whereever there is a grandeur or elegance to an eminent degree in the idea and general composition of a statue, and when the execution of the parts (called by artists the treating of the parts) betrays a want of taste and feeling, there is the greatest reason to conclude, that the statue is a copy, though we were ever so certain of its antiquity. And surely, if evidence of a picture's being a copy proportionably diminishes its value, the same rule of judgment may be no less properly applied to a statue. Modern and ancient art can never, therefore, be fairly compared, till both are made to submit to the determination of reason and nature. It may be observed, that the ancients have chiefly confined themselves to the sublime and beautiful; and, whenever a pathetic subject has come before them, they have sacrificed expression to beauty. The famous groupe of Niobe is one instance of this kind; and, therefore, however great our partiality to the ancients may be, none can hesitate to affirm, that, whenever the moderns shall unite great expression with great beauty, they will wrest the palm out of their hands."

In Sculpture the first thing done, is, out of a great block of marble to saw another of the size required; which is performed with a smooth steel saw, without teeth; casting water and sand thereon, from time to time;

time; then, by taking off what is superfluous with a steel point and a heavy hammer of soft iron, it is brought near the measure required; and still nearer with a finer point; they then use a flat cutting instrument, having notches in its edge, or teeth; and then a chissel to take off the scratches the other has left; till, at length, taking rasps of different degrees of fineness, they gradually bring the work into a condition for polishing.

To polish, or make the parts smooth and sleek, they rub them with pumice-stone and smalt; then with tripoli; and when a still greater lustre is required, they use burnt straw.

To proceed the more regularly, on the head of the model, some place an immoveable circle, divided into degrees; with a moveable ruler, or index, fastened in the centre of the circle, and divided likewise into equal parts. From the end of the ruler hangs a thread with a plummet, which serves to take all the points to be transferred thence to the block of marble, from whose top hangs another plummet like that of the model. But other excellent sculptors disapprove of this method; urging, that the smallest motion of the model changes their measures; for which reason, they rather choose to take all their measures with the compasses, though reckoned more tedious.

In large figures, the first part of the business being labour, and not skill, it is committed to underworkmen: and indeed the whole of this part of the profession being to copy the model, the master seldom troubles himself to work at it, at least, till the close of the process.

In imitating bas-reliefs, if it be a subject which admits of being laid flat, they endeavour to bring the copy to cast the same shadows as the original.

Sculpture has been in England rather a monumental art, than, as it is in many other countries, a decorative profession. Of late, we have had many elegant chimney-pieces of sculpture, but very few large figures, except for tombs. Our best specimens in public are, the statues of Phrenzy and Melancholy, on the piers before Bethlehem Hospital, which deserve to be ranked among the first performances in this art; they were executed in the reign of Charles II. by GABRIEL CIBBER, father of the poet-laureat. There is also a most elegant statue of King Edward VI. in bronze, which stands in one of the courts of St. Thomas's Hospital, in Southwark, by SCHEEMAKER; and one of Sir Isaac Newton, at Cambridge, by ROUBILLIAC.

Westminster-Abbey is the most famous repository of sculpture in England; and it contains many fine specimens; but the figures lose much of their effect by being crowded together without order; whereby one groupe injures another.

St. Paul's Cathedral has lately received further embellishments by sculpture; and more is intended. It affords many noble opportunities and situations for capital groupes, &c. in all parts, but especially in the circumference beneath the dome.

The

The following colors being newly discovered and made public, have been omited in their proper places: we give them here for the satisfaction of our readers.

Brunswick Green.—This is a very valuable and newly discovered color, and is prepared by two brothers, of the name of Gravenhorst, at Brunswick. Hithereto it has been kept a secret; but it is conjectured to be a precipitate of copper which has been dissolved in tartar and water by coction, and which, by evaporation of the lixivium, is deposited in the form of a *cupreous tartar*. A similar color is sold by Messrs. Brandram and Co. in Sise-lane, London, which possesses many, if not all, the rare qualities of that prepared at Brunswick.

Earth, White.—Many ingenious men have employed their talents in discovering a more wholesome, and cheaper, pigment, than white lead; and, perhaps, the finer and whiter sorts of earth might be usefully substituted. The Terra Goltbergensis is of a white color, which is dug up in several parts of Germany, more particularly at Goltberg, whence its name, and Strigaw, and at Lignitz in Silesia. At this time, it is procured in the neighbourhood of Hasselt, in the bishoprick of Liege, in the circle of Westphalia, where it is usually sealed with the impression of an *eagle*, and the words "*Terra Goltbergensis*."—Of tobacco-pipe clays there are also several sorts that appear convertible into pigments, especially one of this class which is found near Lymington in Hampshire, which is not at present turned to much use. But the earth termed *Melinum*

(vide MELINUM), has ever been famous in the annals of painting, being the principal white of the painters of antiquity. It is still found in the same place from whence the painters of old had it, viz. the island of Milo, called Melos by the Greeks, whence its name, and is common in all the adjacent islands. It is not quite so bright a white as white lead; but as it never turns yellow, as white lead does, it is far preferable to that article in the course of time. Besides, as most of the discoloring substances of earths may be attributed to iron, if it were treated with marine acid, the brightest might be improved.

ORANGE LAKE.—This may be prepared by boiling four ounces of the best Spanish annotto, and one pound of pearl ashes, for the space of half an hour, in one gallon of water. Strain the tincture, and mix it gradually with a solution of a pound and a half of alum in six quarts of water, desisting when no ebullition ensues. Treat the sediment as is usual in common lake, and dry it in square bits, or rolls, &c.

PATENT YELLOW.—This color, for which the ingenious Mr. Turner has a patent, is prepared by triturating red lead and common salt together in a mortar, and then exposing them in a crucible (made of tobacco-pipe clay) to a certain heat. The salt is decomposed, the marine acid uniting with the calx of lead, forms the patent yellow; and the basis of the salt, which must be carefully washed out, is the mineral alkali, of so much consequence in the soap, glass, and other manufactories.

SUGAR OF LEAD.—Lead and its calces may be dissolved by the acetous acid, and will afford a crystallizable

tallizable salt, called *sugar of lead*, from its extreme sweetness. This, like all the preparations of lead, is a deadly poison. It has the property of rendering oils thicker, and causing them to dry more rapidly.

TO MAKE WHITE PRECIPITATE OF LEAD.

If a small quantity of strong nitrous acid be poured on litharge (which see), the acid unites itself to the metal with considerable effervescence and heat. Some water being now poured on, and the glass vessel containing the mixture shaken, a turbid solution of the litharge is made. If a small quantity of acid of vitriol be now added, it throws down a beautiful *white precipitate*; and the acid of nitre being left at liberty to act upon the remainder of the litharge, begins anew to dissolve it with effervescence. When it is again saturated, which will be known by the discontinuance of the bubbles, more acid of vitriol is to be dropped in, and a white precipitate is again thrown down. If any of the litharge remains undissolved, the nitrous acid being set at liberty a second time, attacks it as at first; and by continuing to add acid of vitriol, the whole of the litharge may be converted into a most beautiful and durable white. Unfortunately, this color cannot be used in OIL, though in water it seems superior to any.

N. B. If the process be well managed, an ounce of nitrous acid may be made to convert several pounds of litharge into a white of this kind.

It has been strongly recommended to paper-stainers,

ers, and others, who use water-colors in large quantities, to prepare their lakes, and the colors now prepared of chalk, on the basis of the above precipitate of lead.—For instance: if the color required be a very fine one, suppose from cochineal, the coloring matter is to be extracted by spirit of wine, without heat. When the spirit is sufficiently impregnated, it is to be poured by little and little upon the calx: the spirit soon evaporates, and leaves the calx colored with the cochineal. More of the tincture is then to be poured on, rubbing the mixture constantly; and thus, by proper management, many beautiful colors, not inferior to the best carmine, may be prepared. When only a small quantity of color, for the more exquisite touches of the miniature painter, is required, we would recommend the process to be conducted on the basis *of white precipitate*, or *calx of tin*, pursuing the same method of rubbing in the coloring tincture as when *white precipitate of lead* is used. If, instead of cochineal, Brazil-wood, turmeric, logwood, &c. be substituted, different kinds of red, yellow, and purple, may be produced.

By

By way of conclusion to this part of our Work, we shall add some MISCELLANEOUS REMARKS, extracted from a small work by the late ingenious Mr. ROBERTSON; which being only distributed among his private friends, and never *published*, is in few hands: and being the result of the experience of many artists, communicated to him, as well in Italy, as in England, and written down by him, will, we hope, be acceptable to our friends; as certainly many of the ideas and hints are very good.

GROUND AND PRIMING.

Mr. Forrester communicated to me the following observations, which he had from Mr. Patoon and others.

The Venetian masters often worked upon jess grounds thus prepared. Take a fine, and even canvas, or board, and give it one coat of jess made with size; when dry paint upon it. The first coloring will sink in as the jess drinks up the oil, but by that means leaves the greater brilliancy in the colors; the second painting will not sink so much, and also appear very clear, after which you may very safely re-touch, and glaze or scumble with the mastic varnish at pleasure, and your picture will retain by far more force and vigour, than if painted on any other ground. You may likewise paint with safety on this ground (or even on a white silk without any preparation) in water colors, prepared in the common way, any head, figure, landscape, &c. After being harmonized

monized and finished in water-colors, the mastic varnish must be carefully laid on before you proceed to re-touch, glaze or scumble in the usual way with oil and varnish until the effect proves satisfactory; this will bear out and retain more force, delicacy, and clearness, than any oil-painting whatever, and will even last as long, and is also a method made use of by some of the finest colorists in their best works.

It is of great importance in our first and second painting, whether of flesh, drapery, landscape, &c. to paint only with earths, reserving the most clear and brilliant colors for the last painting and glazings, by which means a greater truth and force will always be preserved in our works, and they will also last the longer for it. It may reasonably be supposed, that a proper foundation of strong holding colors is necessary (such as most earths are) under the more delicate, which will make them last and bear out the better: whilst, on the contrary, if earths are used upon the clear and brilliant colors, the effect must be both dull and heavy. Besides, if in dead or second coloring the finest and brightest tints are used, what colors can be found to brighten or finish with?

The method used by Pietro Bianchi, who was a very ingenious and general painter, and whose pictures still maintain a great clearness and freshness, though done forty, fifty, or sixty years—is this: he took one half of drying oil, and the other half of clear nut oil; these he mixed well together, and his picture being dry, he rubbed (with a sponge or brush) these mixed oils upon the picture, leaving it only damp therewith, after which he re-painted or

re-touched

re-touched at pleasure. This method was given by an old scholar of John Baptista Bougieur, who was well acquainted with the said Pietro Bianchi. The same person also informed me, that his own master, Baptista Bougieur, made use of the thick white varnish sold in the color-shops for re-touching and re-painting; but the consequence was, that, after some years, all his pictures became covered with a stuff like a mildew, which after being cleaned off would shortly return.

Signior Gaspar Scarmouchi, who is also an ingenious man, and a scholar of Lucatelli, recommends the use of poppy oil for according, re-touching, or re-painting a picture, which, he says, will never change, and dries much sooner than nut-oil. The method of applying it is by letting the picture be well dried, then rub, with a small sponge dipped in the oil, the part of the painting which you intend to re-touch, after that spread the oil with the palm of the hand, which will make the colors spread and work very agreeably.

Mr. Andrews says, that, if you would unite any part of a picture in water colors, whether sky, face, drapery, or any other part, you must wet the picture on the back, with a clean sponge moderately, so as to damp the colors, after which you may re-touch, scumble, or re-paint, as often as you please, provided the size with which you mix your colors is neither too weak nor too strong, and that the picture be painted on an unprimed fine cloth or silk.—This is Mr. Patoon's secret, and may be repeated with

safety as often as you please to re-touch it, and without any risk.

In order to prevent your colors from ever changing, and to maintain their original beauty, force, and vigor, the cloth should be primed with peach-stone black and white; that is to say, the second going over the cloth, or the last hand, as it is termed, should be done with this black and white, and the picture will maintain itself without the least danger.

According to Mr. West, when you intend to repaint, re-touch, or glaze your picture, let it first be tolerably dry, then give the whole, or the part which you intend to paint, a coat of varnish a day or two before, after which you may mix some of the same varnish with the colors you put on, which will make them bear out with great force and clearness, insomuch that there will not be the least occasion for varnishing those parts when the whole is finished, only covering the other parts that appear dull or sunk in.

According to Mr. Jenkins, when the varnish is very dry on the picture, the best method is to rub on the part to be painted, or re-touched, &c. a little purified nut oil, which must be wiped clean off, so as to leave only a little dampness on the place, which assists the fresh colors in uniting with the old without any sinking in.

Mastic, with nut oil, is very good for re-touching, to be used instead of the white varnish sold at the color-shops.

For re-touching or bringing out pictures when sunk in, take purified nut oil, and mix it with oil of lavender

lavender in equal quantities: rub it on the part, or, if the part is too fresh, mix the oils with the color on the pallet, or dip the pencil in it. This oil of lavender renders the colors pleasing and most agreeable, making them appear of a good body, easy to work, and quick to dry; so that the same part of a picture may be painted on, day after day, until it is finished, without the least inconveniency or bad effect.

MILDEW.

Some say, that, by shutting up a fresh picture on which you have put a mastic varnish, it will become mildewed, wherever that varnish has touched: however, the method of taking off that mildew is easy, and may be done thus:

To prevent Mildew from Varnish.

Wash the picture with a clean sponge, dipped in an equal quantity of vinegar and water, milk warm, which will take away the mildew effectually; afterwards it will be necessary, when the picture is dry, to rub it over with a clean soft sponge or cotton, moistened with purified oil, which you must wipe off as clean as you can with cotton, or any other material that will take the moisture of the oil away, and the picture will become clear, and look as fresh as ever.

Mr. Jenkins's method of taking off mildew from mastic varnish, is, by taking an equal quantity of spirits of wine, and rose water mixed, and so rub

it on with a sponge, till it takes off the old varnish, after which wash the picture with clean water, and when it is dry you may put on a fresh varnish again; but if the varnish has been mixed in the color at the time of painting, or re-touching, as is practised by many painters, you must not attempt to take it off by any means.

COLORS.

Umber burned or unburned is a good color, especially for dead coloring; it is used and recommended by Mr. Mengs, and has a good body.

Terra de Sienna burned, and mixed with dark yellow, and terra rosa, make a fine tint.

Crystal pounded to an impalpable powder is an excellent dryer of the colors, mixed either with oil or varnish.

In order to dry a picture suddenly, place the back towards the sun, which will effect it without the least detriment to the colors.

The best sort of the Terra de Sienna burned, mixed with white, and a little ultramarine, makes an exquisite flesh or fine color for skies, &c.

Terra rosa Persica, with black and white, make an excellent fleshy tint.

Indian red, with ivory black, makes a fine color.

The black earth of England is a very fine color. Persico or peach stone black is a fine bluish black, and the best and safest in flesh, skies, water, &c.

A most excellent black may be made thus: take a quantity of white paper, the whiter and cleaner the better,

better, and burn it, preserving the ashes, which will, when mixed with oil, make a fine black.

GLAZING.

A very fine glazing liquid for the more delicate parts of a picture may be thus made: first grind the mummy or burned lake, or any other glazing colors, very fine on the stone with oil; when you are making the varnish, put in these colors, and let them boil in them till the varnish is made (mastic), in which time the colors will sufficiently incorporate with the varnish. When you are going to make use of it, in order that the colors may be mixed the better, stir the bottle well. This makes the most delicate glaze that can possibly be, and which may be put on any part of the picture; it will mellow it in the finest manner, without leaving the least smuddled effect, or even the appearance of being glazed at all.

The finest brown used by Mr. West in glazing is the flesh of mummy; the most fleshy are the best parts; the threads of the garments, or any dirt which may prevent its grinding, must be intirely cleared away; after which it must be ground up with nut oil very fine, and may be mixed for glazing with ultramarine, lake, blue, or any other glazing colors; when it is used, a little drying oil must be mixed with the varnish, without which it will be longer in drying, which is the only defect it has, as it may be used in any part of a picture without fear of its changing.

The

The finest brown next to that of mummy is the Prussian blue burned, which is to be used in the same manner for glazing as the former, with this difference, from its being a better drier, there is no occasion to use drying oil with the varnish. In some respects, this has the advantage of the mummy, being very little, if at all, inferior in point of color; it dries better, is obtained with less difficulty, and ground with greater ease.

A good glazing brown is made of gumbouge burned; it is very similar in color to asphaltum, but much inferior to the mummy, or blue.

To obtain a very lively and beautiful green, paint the object, whether tree, drapery, &c. quite blue, afterwards glaze it over with brown pink, which will produce the wished-for effect.

The finest green may be produced by painting the ground white, and glazing over it with verdigrease mixed up with varnish.

OILS.

Linseed oil is expressed from the seed of line or flax. It is the principal oil used in all kinds of paintings, or, indeed, the only kind, except for some very nice purposes, where its brownness renders it unfit. The principal defects of linseed oil are these, a brown color, and a slowness in drying, both of which are in a much greater degree in some parcels than in others, arising sometimes from an accidental mixture of seeds growing with it, which make it partake of the nature of olive oil, which cannot

not be brought to dry by any art or means whatever. The excellence therefore of linseed oil consists in its near approach to a colorless state, and its soon drying. With respect to the first quality, it may be distinguished by inspection only; but the second can only be known by trial, for there is no particular appearance, or other immediately perceptible mark attending this last quality. Linseed oil is in general used without any other preparation than the mere mixture of it with the proper dryer, but to keep it a considerable time before it is used will always be found to improve it. It is nevertheless used sometimes after it is wrought into the state of drying oil (not to mix and make other unprepared parcels dry) but alone, as the sole vehicle of the colors. The convenience of this is the speedy drying of the paint so composed, but it cannot be practised when the beauty of the color is of the least consequence; for, in this case, the oil imparts a strong brown to the mixture.

Nut oil is the oil of walnuts pressed out of the kernels by means of a screw-press; it is used for the purpose of mixing with flake white, or other pigments, where the clearness of the color is of great consequence, and would be injured by the brownness of linseed oil. It is used without any other preparation than keeping, which is ever found to improve it with regard to its color and quality of drying. The adventitious faults of nut oil are turbidity, slowness in drying, and not being perfectly colorless; inspection points out the first, but the remaining two must be examined by trial: if, however, there is no adulteration in the case, time will generally cure it of all defects.

defects. Whoever would have nut oil perfectly good should peel the skin of the kernels before they press them, for the skin contains an acid oil of a very different nature from that of the kernel, and is extremely subject to turn brown, or even black, and consequently tinges the other when expressed with it.

POPPY OIL is expressed from ripe seeds of poppies, in the same manner as nut oil from walnuts: its qualities and uses, defects and remedies, are also much the same, only when it is perfectly good it is much clearer, and will also dry better than the best nut oil.

Oils of SPIKE or LAVENDER are essential, or distilled oils, obtained by distilling spike, or any other lavender, with water. It is used in painting, only as the vehicle for laying on the composition formed of the flux, and colors in enamel painting, which its fluidity renders capable of being worked with a pencil, its volatile nature afterwards rendering it wholly dry, without leaving any matter that might affect the substances of the enamel, which an essential oil is only capable of. Oil of spike and lavender is subject to be adulterated by the oil of rosemary.

END OF THE COMPENDIUM OF COLORS.

The Artist's Repository,

or

ENCYCLOPEDIA of the FINE ARTS.

Vol. 3.

Landscape, Compendium of Colours.



1813.

London Published by C. Taylor, No. 108, Hatton Garden, Holborn.



Encouragement.



Preparation

of Colours for Use.



Instruction

in the Use of Colours.



War.



Hope.

Plate II, page 94.



HANDLING.

Plate 12, page 94.



HANDLING.

Plate 45. page 152.



YOUTH.

Plate 46, page 152

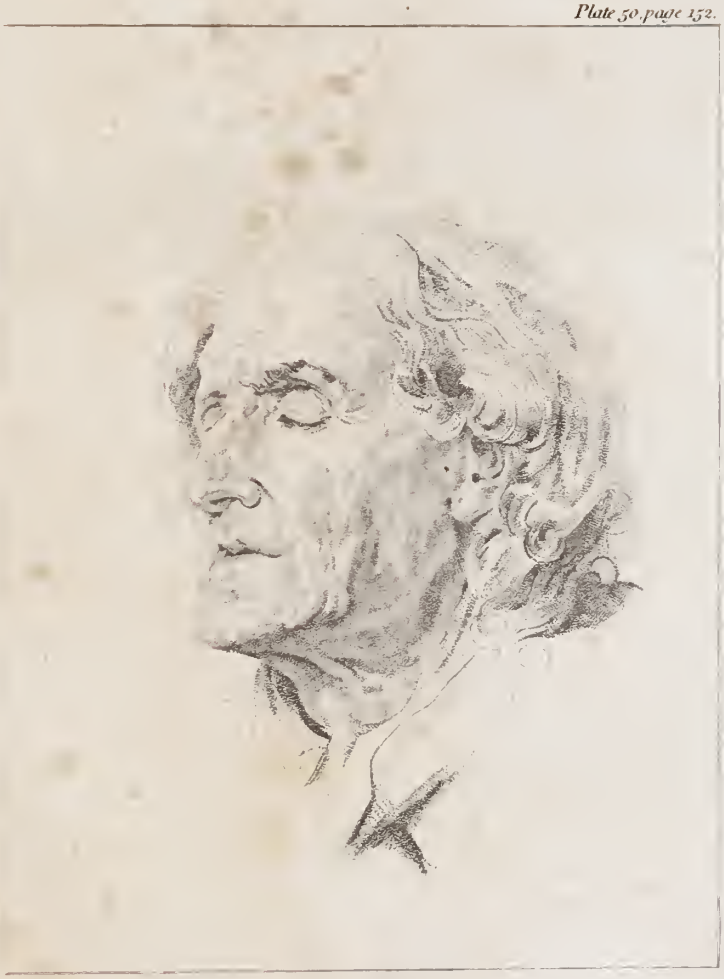


MATURITY.

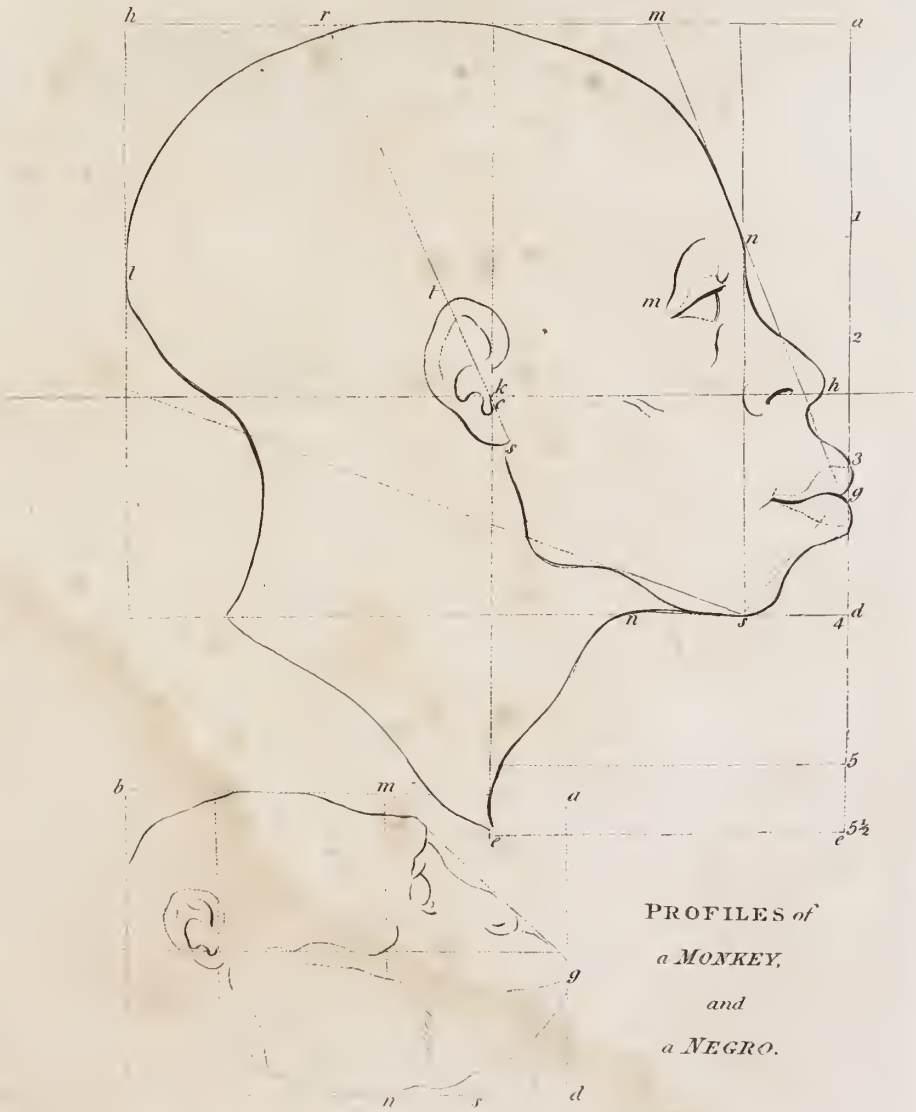
Plate 49. page 152



AGE

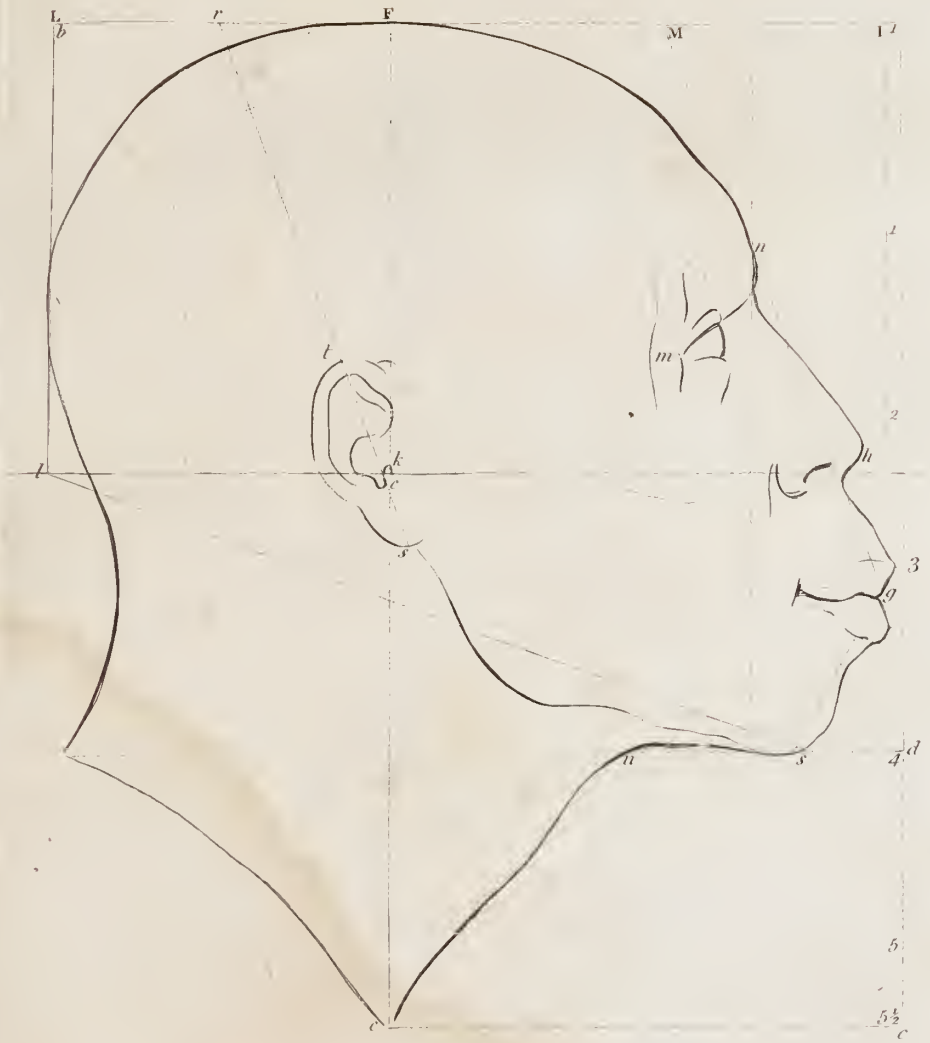


OLD AGE.



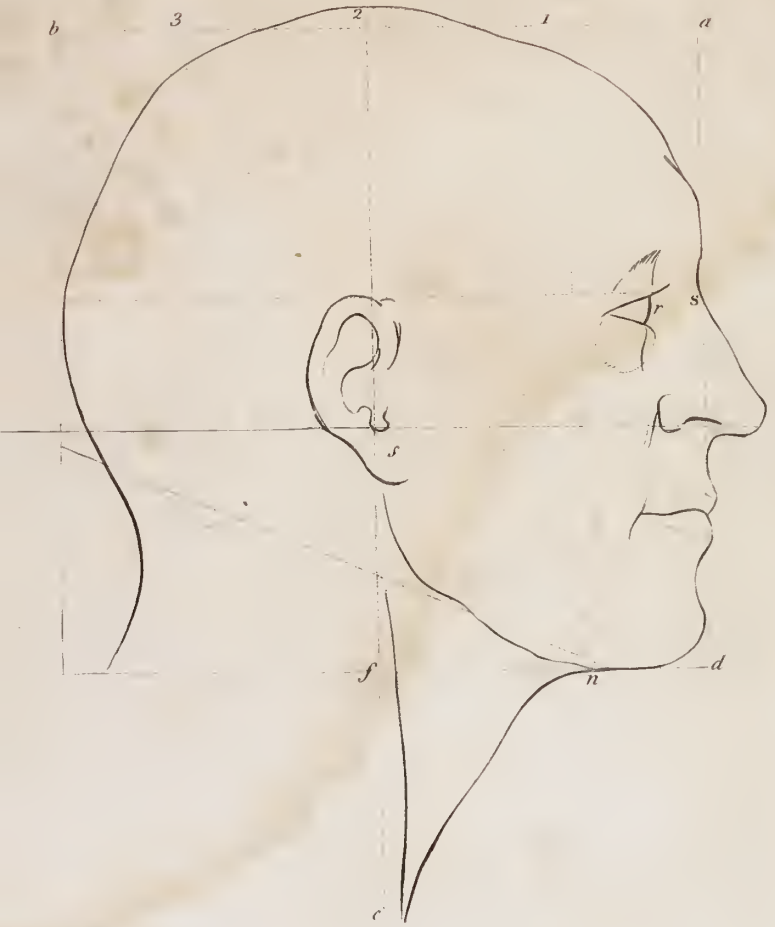
PROFILES *of*
a MONKEY,
and
a NEGRO.

Plate 64. page 155.

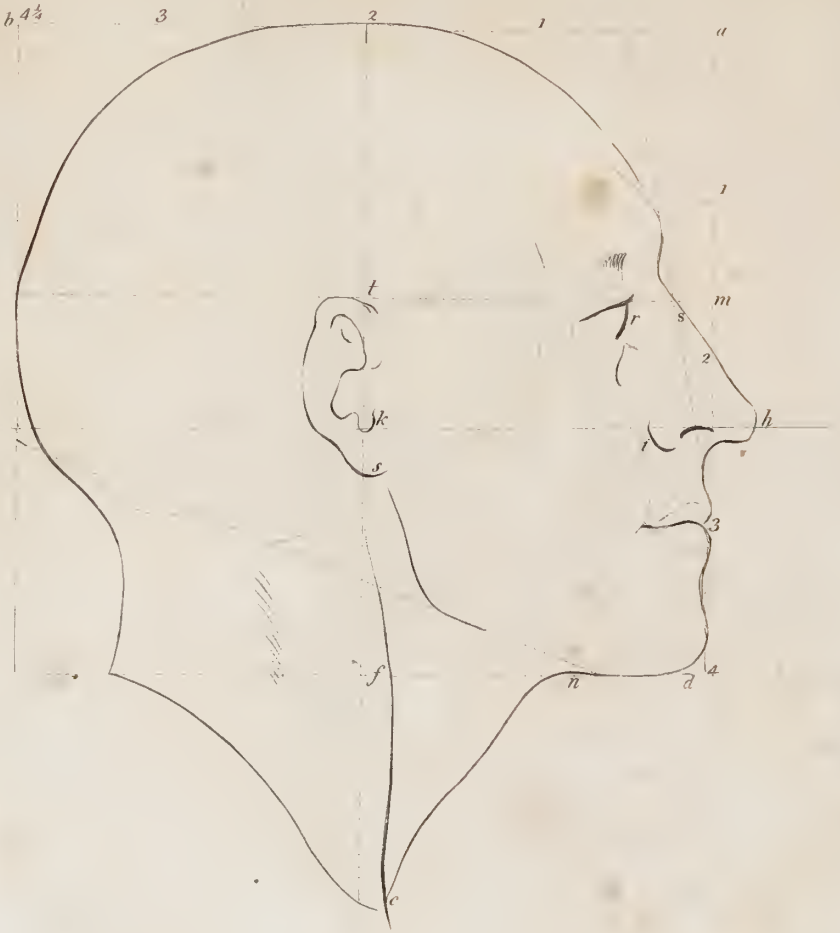


PROFILE *of a* CALMUC TARTAR

Character Plate 65. pa. 155

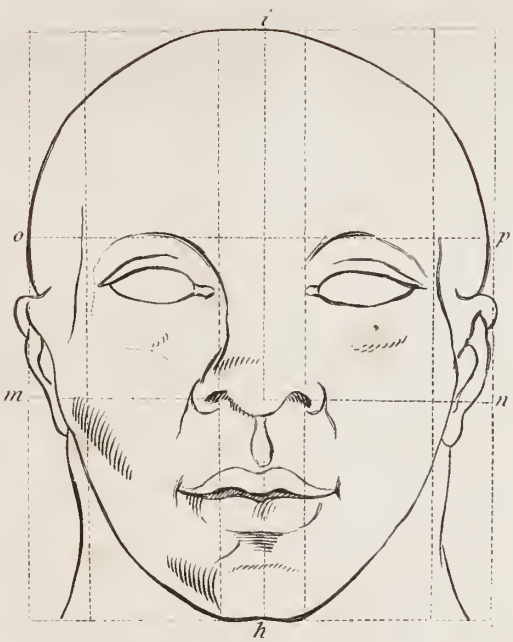


IDEAL HEAD.

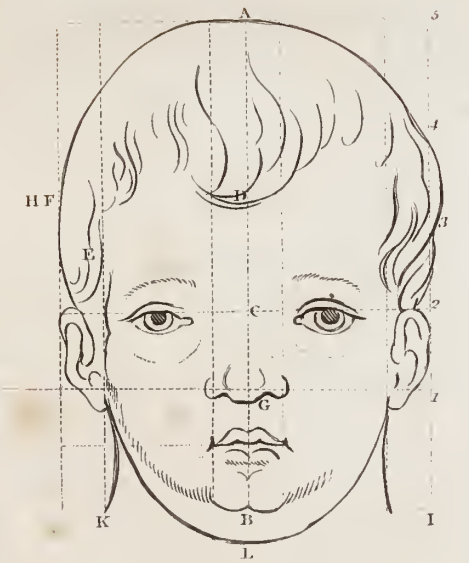


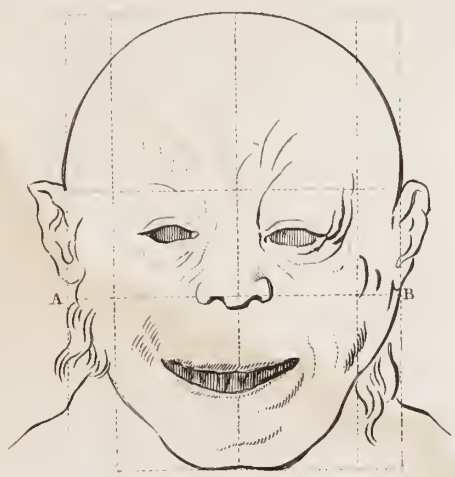
EUROPEAN

Page 160 Character Plate 68.



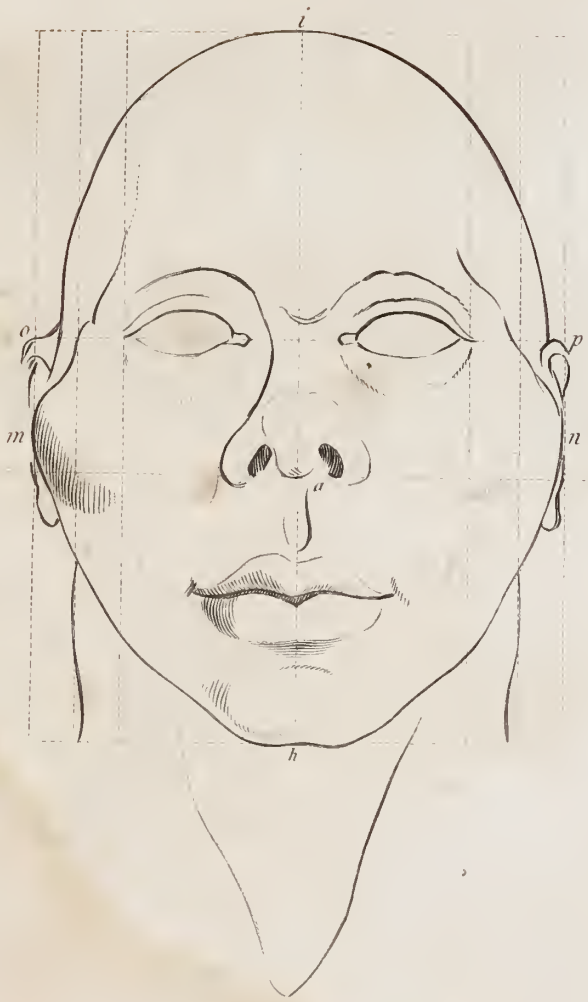
NEGRO.





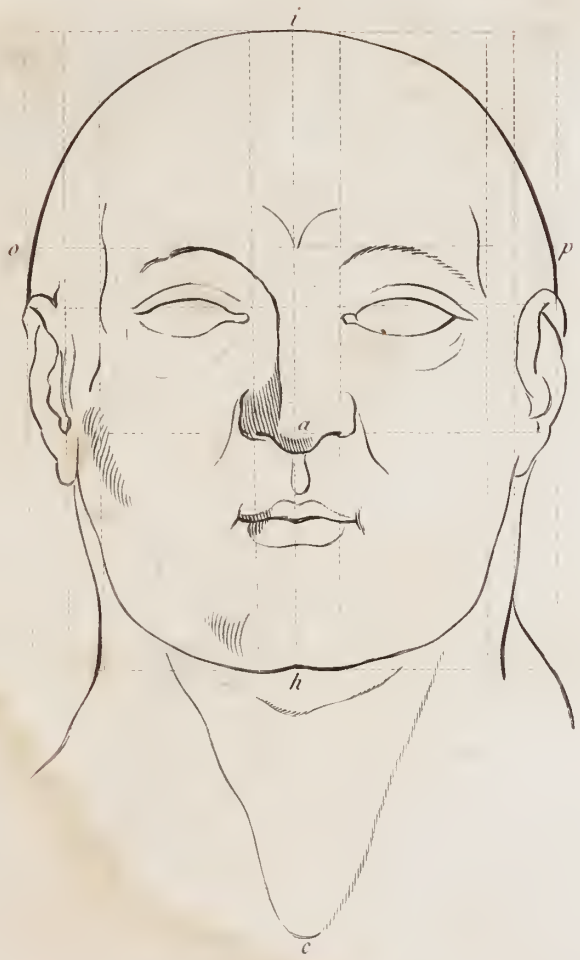
ORAN OTAN.

Character Plate 69, page 160.



CALMUC TARTAR

Character Plate 70. page 160.



EUROPEAN.

Character Plate 71 page 62.



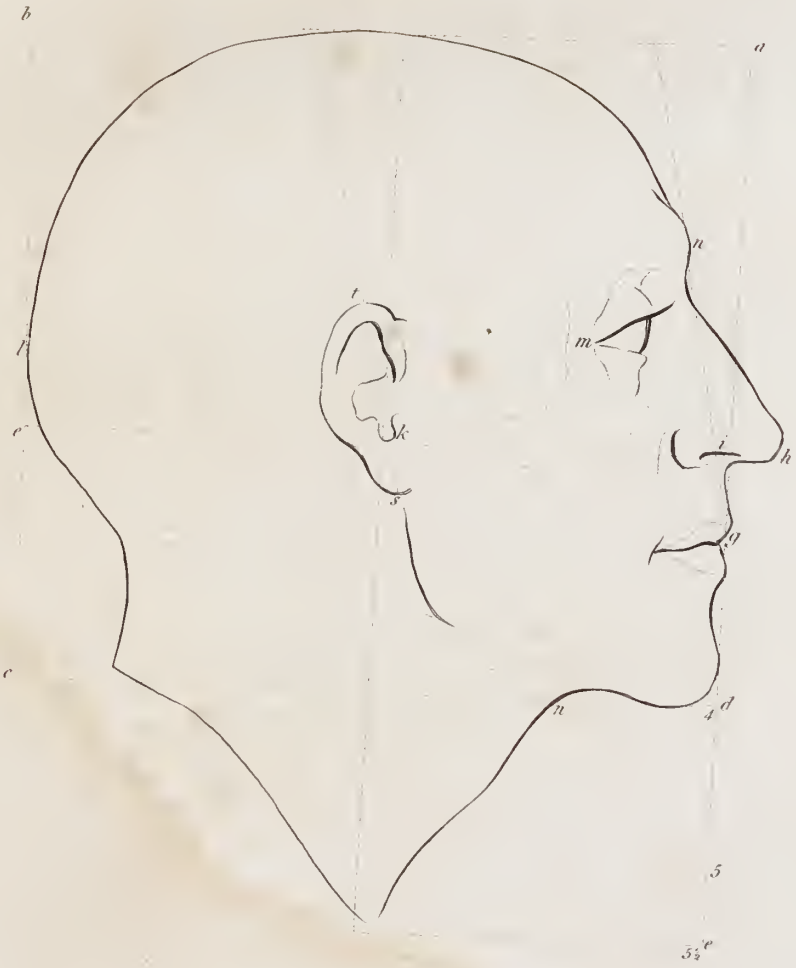
INFANT

Plate 72, page 163



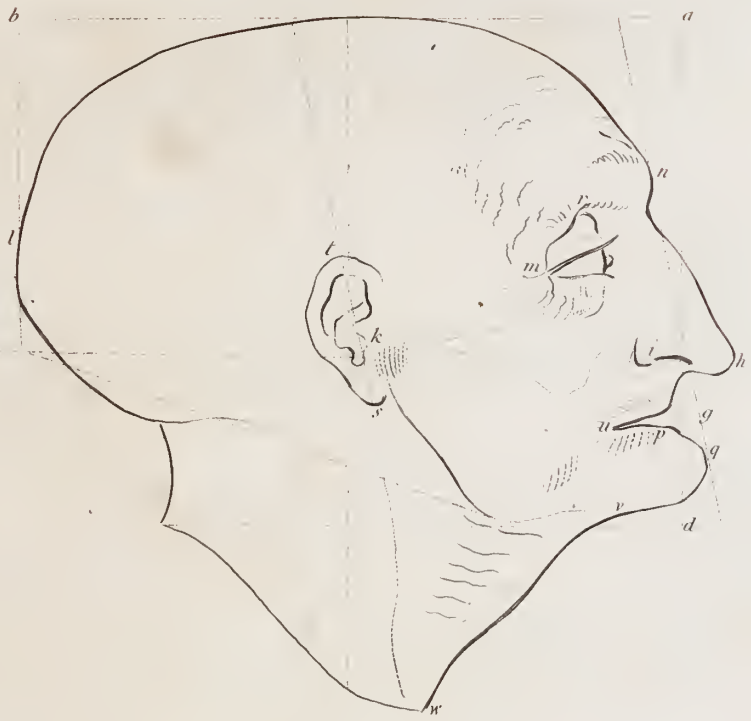
CHILD

Character Plate 73 pa. 163.

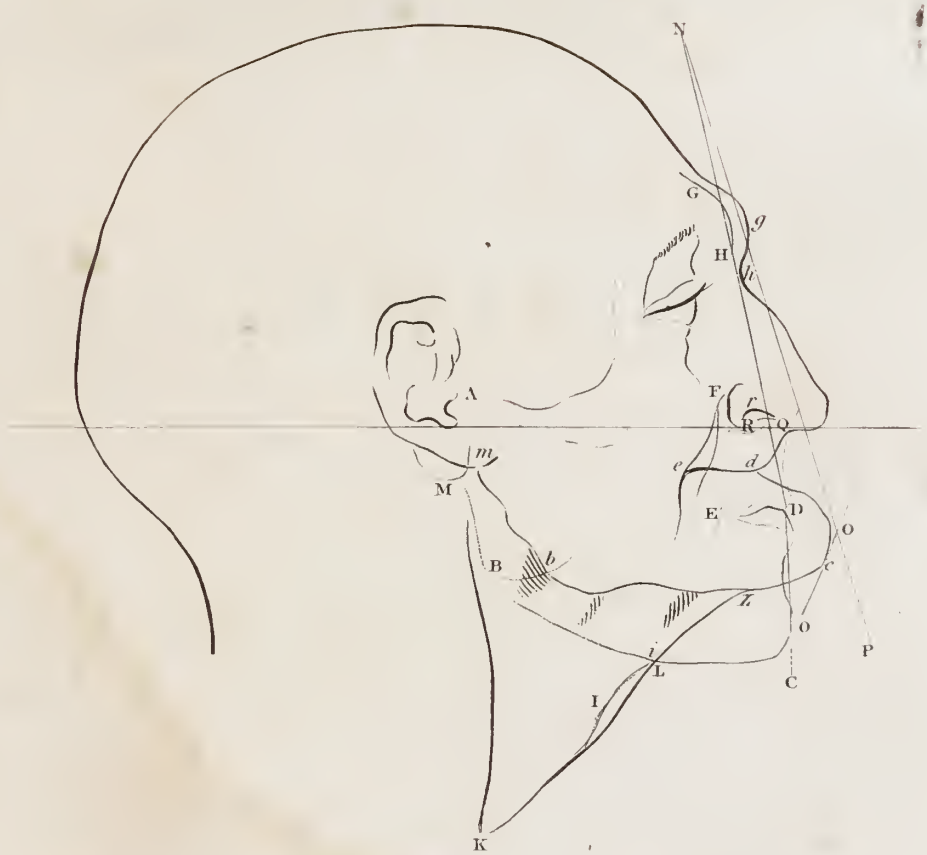


MATURITY

Plate 74 page 164.

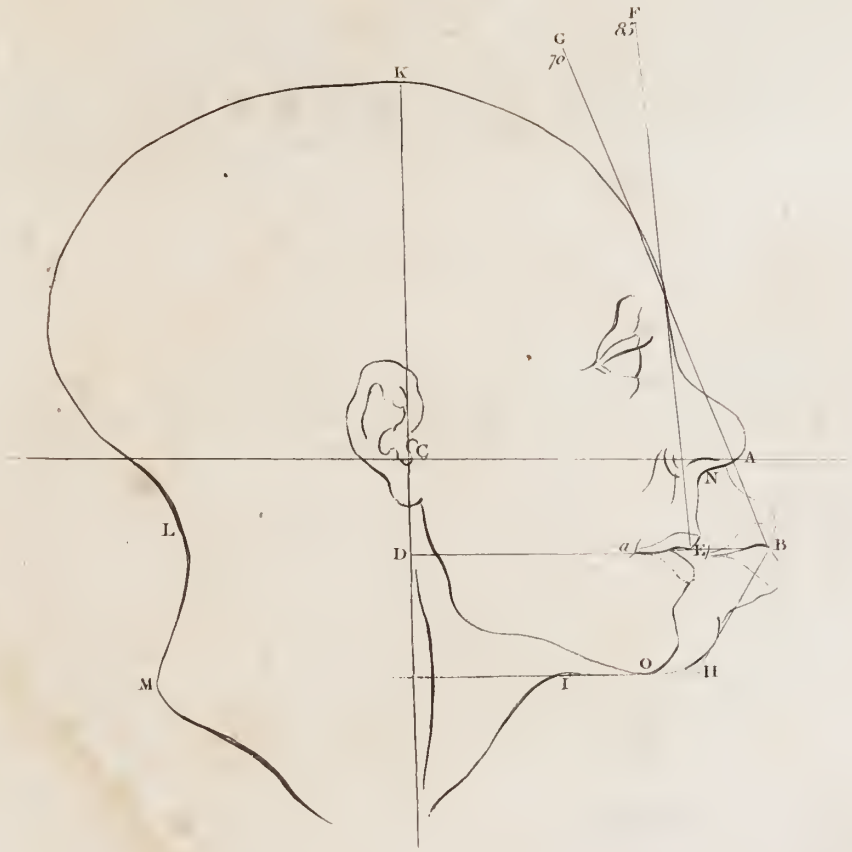


OLD AGE



DIFFERENCE of MATURITY and AGE

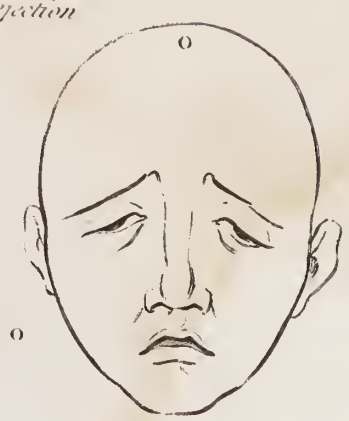
Plate 76, page 167.



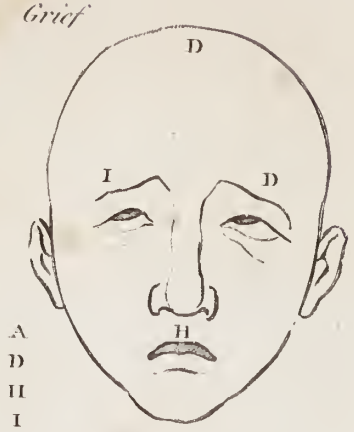
DIFFERENCES *of* EUROPEAN *and* NEGRO

EXPRESSION

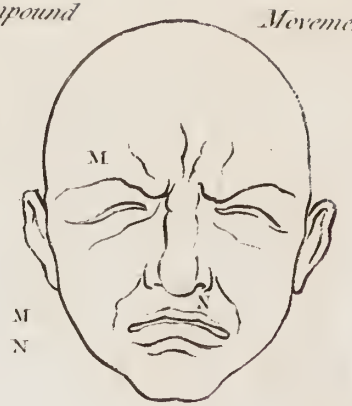
Dejection



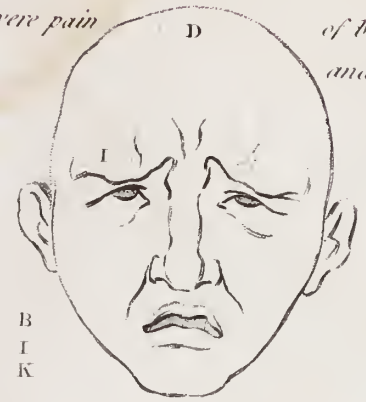
Grief



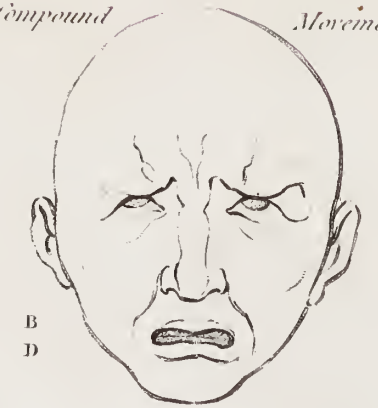
Compound *Movement*



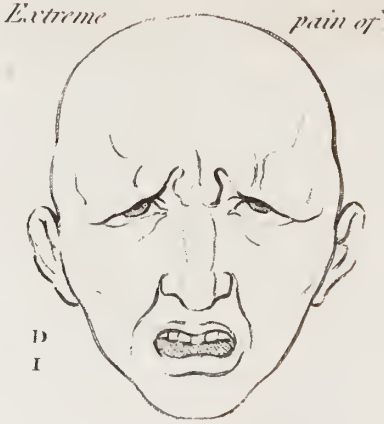
Severe pain *of body and mind*



Compound *Movement*

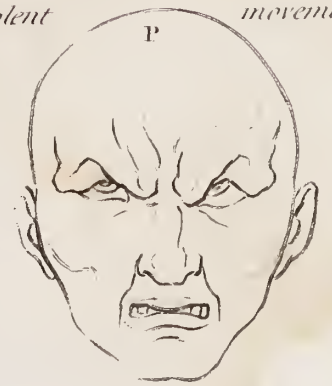


Extreme *pain of Body*

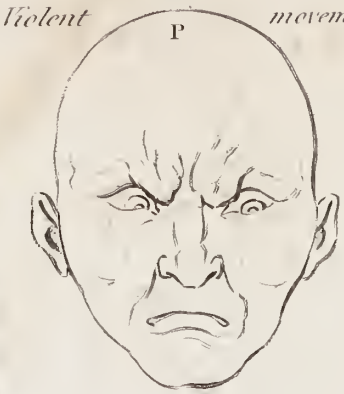


EXPRESSION

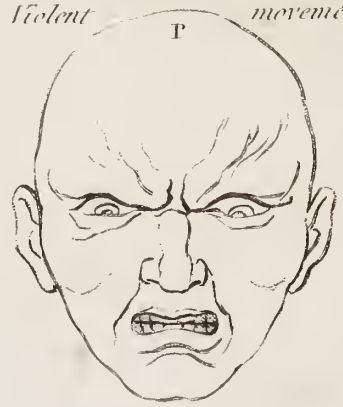
Violent movement



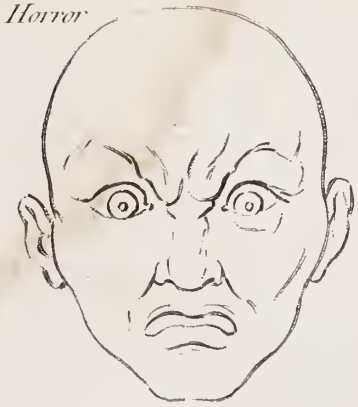
Violent movement



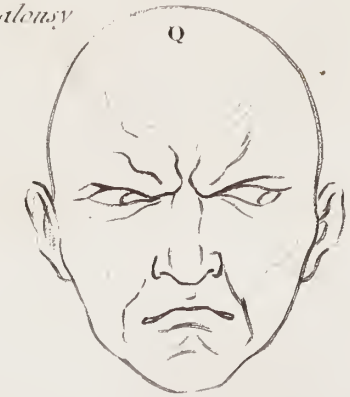
Violent movement



Horror



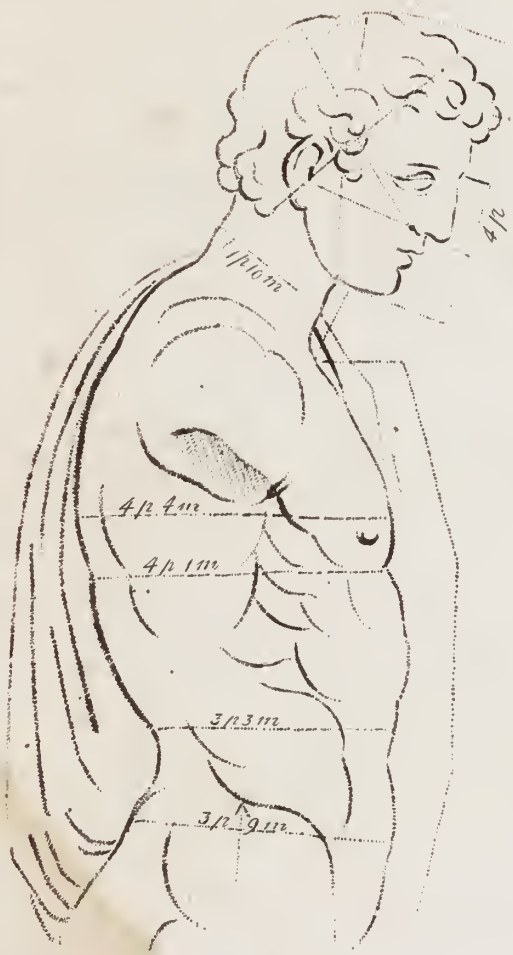
Jealousy



Scorn

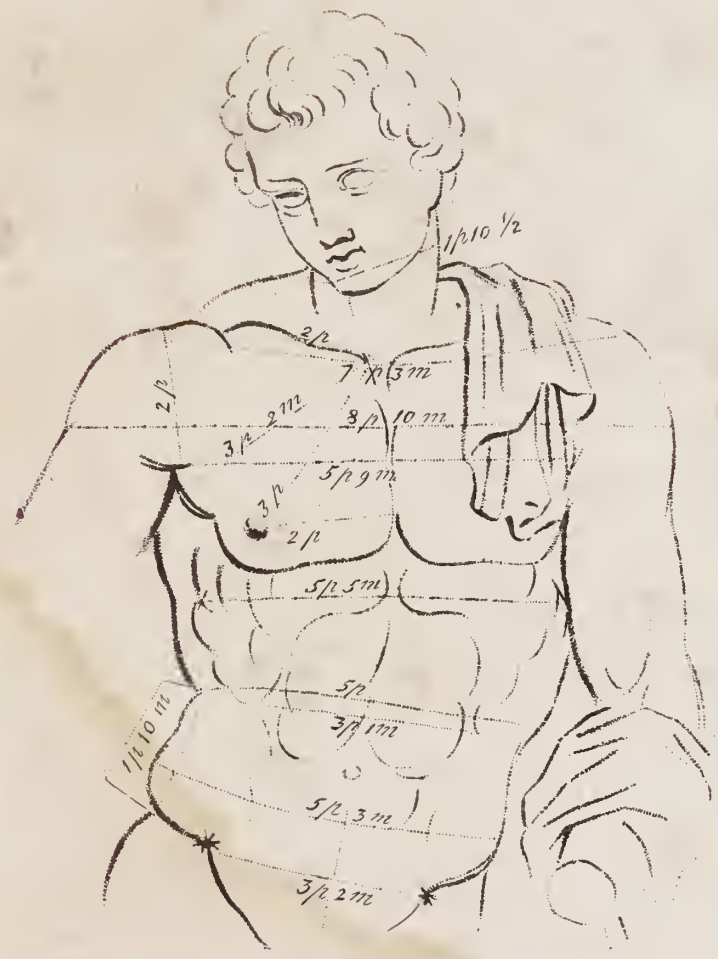


plate 95 page 216.



ANTINOUS.

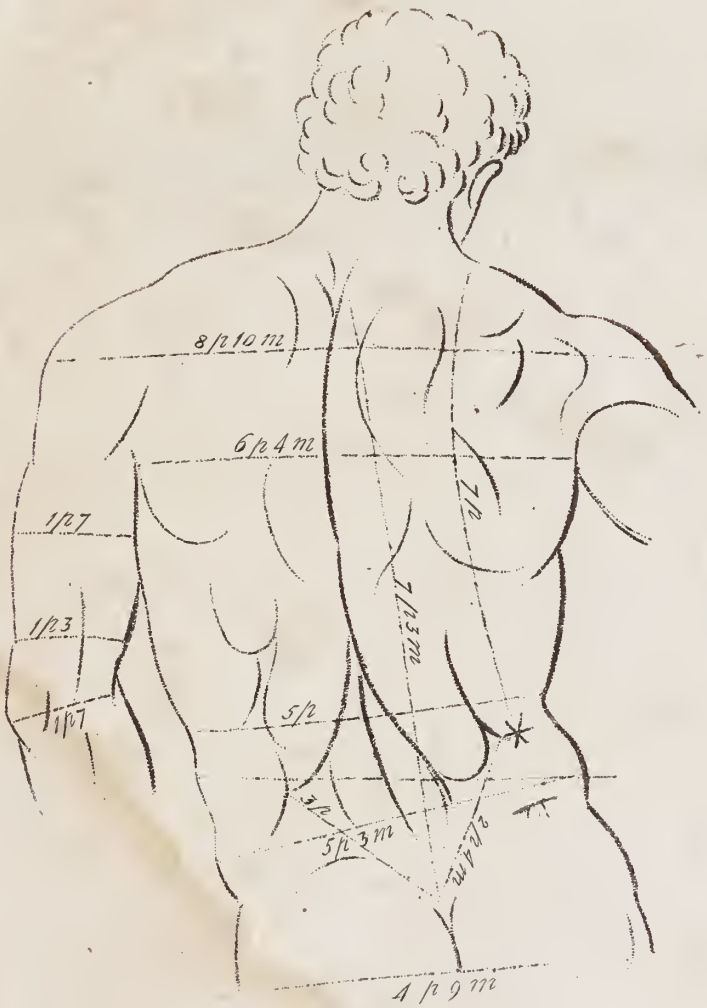
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ANTINOUS.

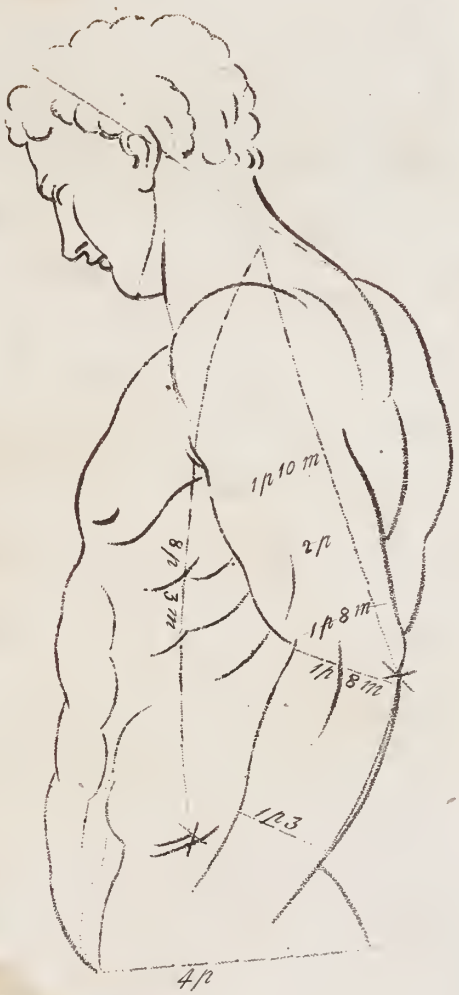
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Plate — page 26.



ANTINOUS.

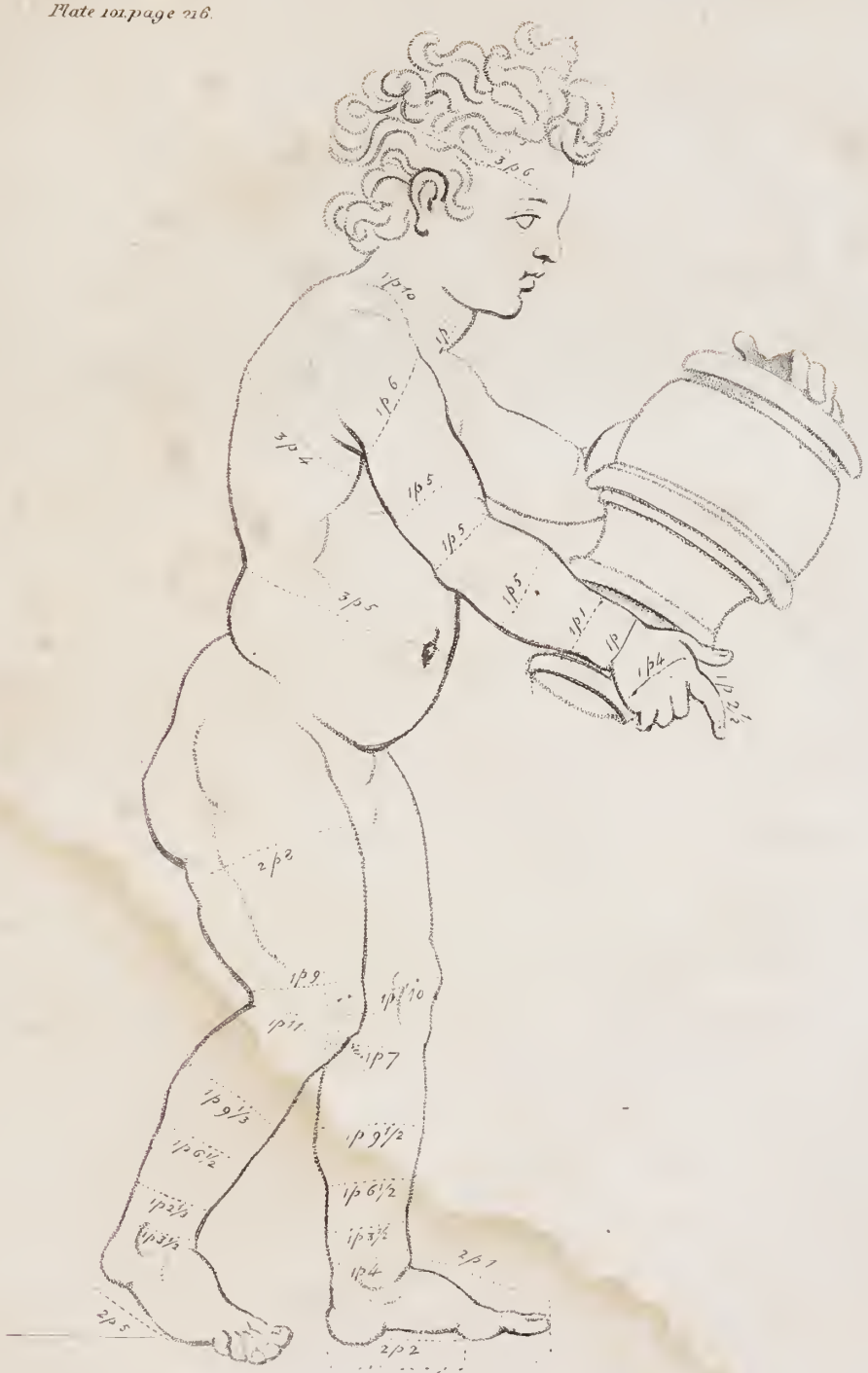
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ANTINOUS.

measured from the Antique

Plate 101 page 216.



3p 4 3/5 *From the Antique.*

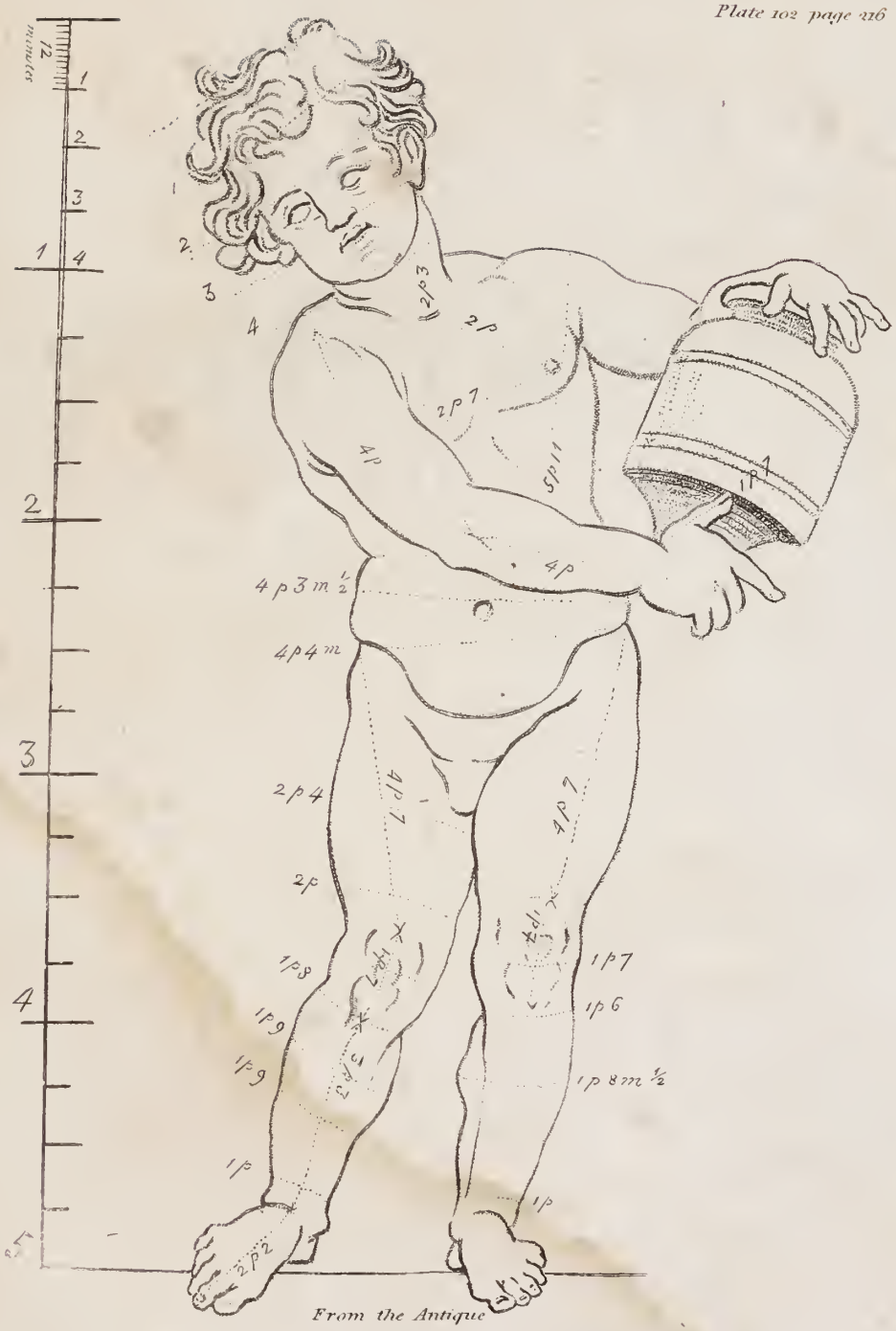

minutes
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2p
2p7
4p
5p11
1p
4p
4p3m½
4p4m
2p4
4p7
2p
1p8
1p9
1p9
1p
1p7
1p6
1p8m½
1p
2p2
From the Antique

Plate III. page 247.





SANCHO PANÇA.

Plate vi6, page 24



SANCHO PANÇA.

Plate 114, page 247.



CHARACTER,

Plate 115. page 245.



CHARACTER,

Plate 17, Page 266



MOTION

From an Original Drawing by Poussin

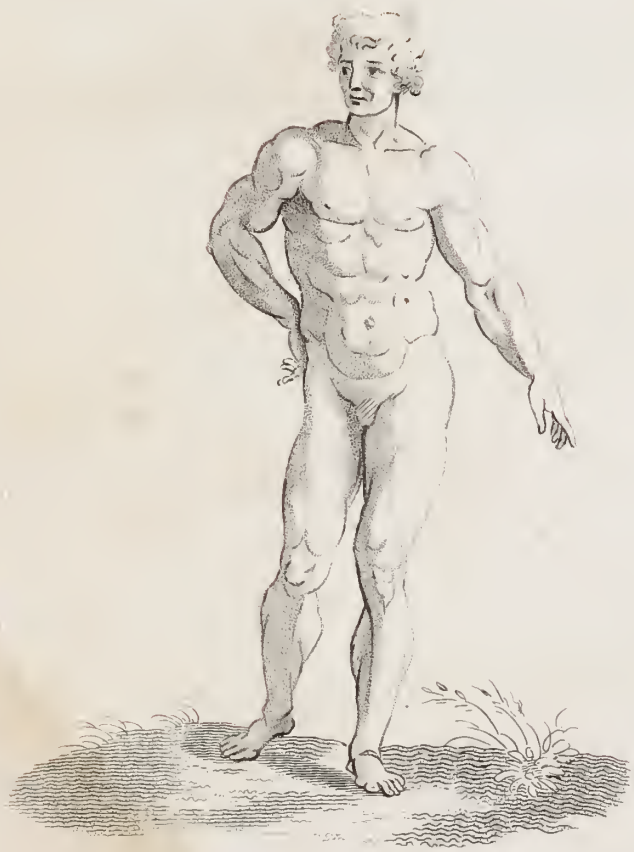
Plate 118, Page 266



MOTION

From an Original Drawing by Poussin.

Plate 119, page 267.



MOTION

From an Original Drawing by Pouſsin.

Plate 120, page 267



MOTION

From an Original Drawing by Poussin.

Plate 121 page 268.



MOTION.

From an Original Drawing by Poussin.

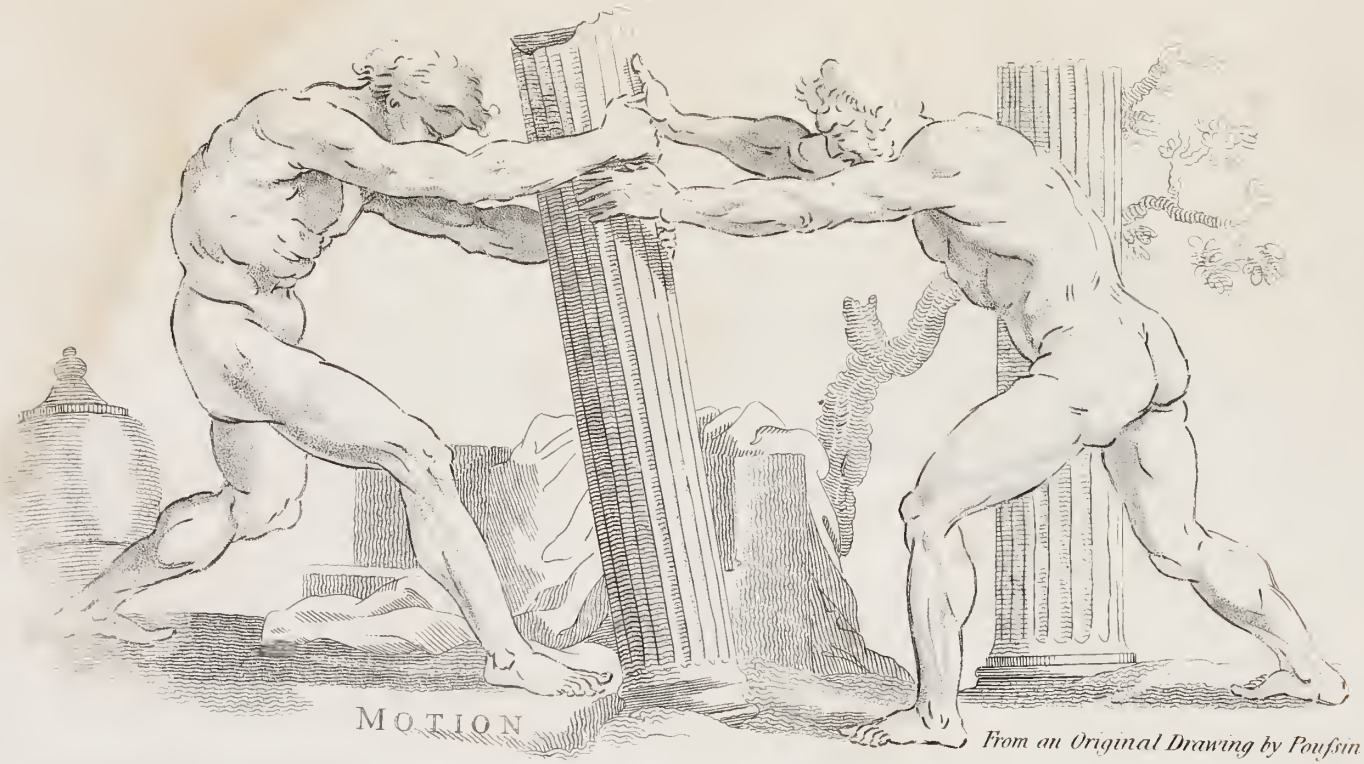
Plate 122 page 268.



MOTION.

From an Original Drawing by Pouſsin

Plate 123, page 269.



MOTION

From an Original Drawing by Poufsin

Plate 124. page 269



MOTION

From an Original Drawing by Pouſsin

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